WILDLIFE RESPONSE PLAN
FOR CALIFORNIA

California Department of Fish and Game
Office of Spill Prevention and Response

June 30, 2005

WILDLIFE RESPONSE PLAN

FIGURES AND TABLES

WILDLIFE RESPONSE PLAN APPENDICES

Acronyms Used in the Oiled Wildlife Response Plan

ACP	Area Contingency Plan
ART	Applied Response Technology
ATV	All Terrain Vehicle
CWHR	California Wildlife Habitat Relationship System
DFG	Department of Fish and Game
DPR	Department of Parks and Recreation
DWR	Department of Water Resources
EPA	U. S. Environmental Protection Agency
ESI	Environmental Sensitivity Index
FOSC	Federal On-scene Coordinator
GIS	Geographic Information System
GPS	Global Positioning System
IAP	Incident Action Plan
ICS	Incident Command System
ISB	In-situ Burning
MMSN	Marine Mammal Stranding Network
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPS	National Park Service
OPA-90	Oil Pollution Act of 1990
OSPR	Office of Spill Prevention and Response
OSPRA	Lampert-Keene-Seastrand Oil Spill Prevention and Response Act
OWCN	Oiled Wildlife Care Network
RP	Responsible Party
SCAT	Shoreline Cleanup Assessment Team
SLC	State Lands Commission
SOSC	State On-scene Coordinator
SWRCB	California State Water Resources Control Board
UC	Unified Command
USCG	U. S. Coast Guard
USFWS	U. S. Fish and Wildlife Service

3600 - WILDLIFE RESPONSE PLAN FOR CALIFORNIA

3600.1 PREFACE

Wildlife and habitats are put at risk or injured when oil is spilled into the marine environment. Both Federal and State statutes mandate protection, rescue and rehabilitation of oiled wildlife.

The Federal Spill Pollution Act of 1990 (OPA 90) requires that a Fish and Wildlife and Sensitive Environments Plan be developed and include immediate and effective protection, rescue and rehabilitation of wildlife resources and habitat that are harmed by a spill.

The State of California's Lempert-Keene-Seastrand Oil Spill Prevention and Response Act (OSPRA) requires:

- Development of contingency plans for the protection of fish and wildlife,
- Establishment of rescue and rehabilitation facilities,
- Establishment and funding of a network of rescue and rehabilitation facilities, known as the Oiled Wildlife Care Network,
- Assessment of injuries to natural resources from a spill,
- Development of restoration plans to compensate for adversely affected wildlife resources and habitats.

To address these statutory mandates, the Wildlife Response Plan for California (Wildlife Plan) has been developed by a group of federal and state agencies and other interested parties. The Wildlife Plan is part of the Regional Response Plan/Area Contingency Plan for California, a joint document of U.S. Coast Guard (USCG) and California Department of Fish and Game, Office of Spill Prevention and Response (OSPR).

The Wildlife Plan details the Wildlife Operations Branch purposes, goals, objectives, responsibilities, and structure. The Wildlife Operations Branch is in the Operations Section of the Incident Command System for oil spill response. The Wildlife Operations Branch structure needed in California and detailed in this plan is expanded beyond that described in the USCG Incident Management Handbook at the Group level. As is always true, the structure may be expanded or contracted to fit the need, but the mission remains unchanged.

In California, the principal objectives of Wildlife Operations during a spill response are to:

- Protect wildlife and habitats from contamination,
- Minimize injuries to wildlife and habitats from the contamination,
- Minimize injuries to wildlife from the cleanup,
- Provide best achievable care for injured wildlife, and,
- Document adverse effects that result from the spill and cleanup.

The Wildlife Response Plan for California was first drafted and adopted in 1999 as the state-wide plan for wildlife response. Prior to this, each Captain of the Port Area Contingency Plan

had its own wildlife response element and each bore great resemblance. The advent of the Oiled Wildlife Care Network and the experience of several intervening spills revealed that greater clarity and uniformity were needed to fully address the statutory requirements. The 1999 Wildlife Plan provided state-wide consistency and better explanation as to the responsibilities and capabilities of the Wildlife Operations Branch within the Incident Command System.

In this 2005 revision, the Wildlife Plan has been modified and expanded to ensure the statutory requirements of best achievable treatment, protection, and restoration of wildlife are met. This revision clarifies the organizational structure and details the required duties of the different positions within the Wildlife Operations Branch.

The Wildlife Plan has been written with the view that California Department of Fish and Game Office of Spill Prevention and Response staff will usually assume the role of Wildlife Branch Director during a spill response. This is a natural consequence of the pivotal position of the Department of Fish and Game, because the Department:

- Is the lead state trustee agency for California's fish and wildlife,
- Has permits and agreements with other agencies, to care for special status species and other protected wildlife
- Has legal mandates to protect wildlife, beyond OPA 90 and OSPRA and,
- Has the needed expertise, training and experience

While the Wildlife Plan has been designed principally to cover oil spills in marine waters as required by Federal and State law, it is applicable to inland oil and non-oil spills as well. The organizational structure, roles and responsibilities remain the same, although some functions may be altered, as appropriate.

3600.2 INTRODUCTION AND BACKGROUND

When oil spills occur in California the Incident Command System (ICS) is used as the organizational structure to coordinate response actions. The actual response organization grows to fit the level of response necessary for a specific incident. For that reason, when a specific ICS position is discussed in this Wildlife Response Plan, readers should realize positions and duties may be combined (or not needed).

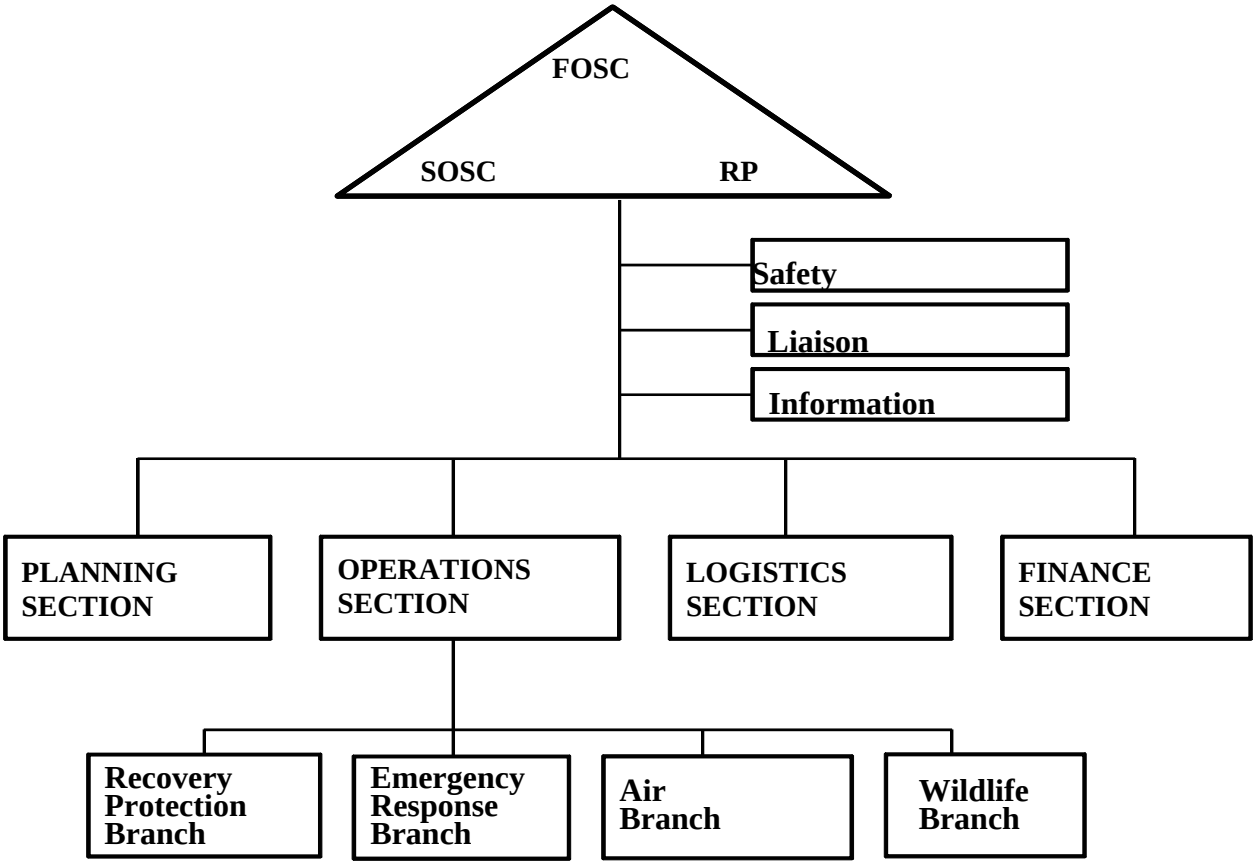
The ICS organizational structure typically includes the Unified Command and the Operations, Planning, Logistics and Finance Sections. In California, response actions concerning the protection, identification, rescue, processing and rehabilitation of oiled or threatened wildlife are performed by the Wildlife Branch (commonly referred to as Wildlife Operations), a branch in the Operations Section within the Unified Command/Incident Command System (Figure 1).

This Wildlife Response Plan for California describes the responsibilities and capabilities of the Wildlife Operations Branch within a Unified Command during an oil spill. The Plan describes procedures to be used along with personnel and equipment needed to meet wildlife protection responsibilities of Federal and State governments during a spill. The Wildlife Response Plan is a section within the Regional Response Plan and local Area Contingency Plans, the primary guidance documents regarding natural resource protection during a spill in California. This Plan can also be used as a stand-alone document.

Primary responsibility for oiled wildlife protection, rescue and rehabilitation will most likely be handled by Department of Fish and Game, Office of Spill Prevention and Response (OSPR) because it has specialized expertise on California wildlife and has legal mandates as the lead state trustee agency for fish, wildlife and their habitats (Fish and Game Code Sections 1802 and 711.7). Also, under OSPRA, OSPR has the mandate and the capacity to mobilize its wildlife response resources immediately, if necessary, to provide the best achievable protection for the state's wildlife in the event of a marine oil spill, in accordance with the State Contingency Plan and the Area Contingency Plan (ACP) (Government Code §§ 8574.7, 8670.3(c) (1), 8670.5, and 8670.7(b)). Barring any unusual circumstances, an OSPR employee usually assumes the role of Wildlife Branch Director. Therefore, when a spill has occurred, it is imperative to notify OSPR in a timely manner, because the best time to prevent or minimize adverse effects upon wildlife is during the earliest stages of the spill response.

Even though Wildlife Operations is integrated into the ICS, it is self-directed in many ways and self-contained with regard to wildlife response resources (both staff and equipment). Wildlife Operations gathers much of its own spill information through wildlife reconnaissance, staffs its own Branch with pre-trained experts (e.g. veterinarians, rehabilitation staff, processing staff, capture experts, volunteers), and prepares its own sections of the Incident Action Plan for the Planning Section.

Figure 1. Wildlife Branch position in the Unified Command/ICS Organization.



Even though Wildlife Operations is self-directed and self-contained in many ways , coordination between the Wildlife Branch and other Sections within the ICS is critical. The Wildlife Branch provides the Planning Section with known wildlife concerns and wildlife reconnaissance data. The Planning and Operations Sections use this information to aid in strategic assessment and for planning response strategies. The Planning Section should use this information to evaluate different response countermeasures and strategies, including "no action", in order to reduce or prevent adverse effects to wildlife and wildlife habitat from response actions. Through the Situation and Environmental Units in the Planning Section, the Wildlife Branch Director also must provide the Unified Command with updated wildlife statistics during the response. This information is also frequently relayed to the Public Information Officer to be used in press releases. The Wildlife Branch Director needs information from the other Sections. For example, the Resources at Risk Specialist in Planning can provide information about sensitive species and habitats, maps of sensitive areas, and sensitive cultural resource location information for use when planning Wildlife Branch Operations.

Under the direction of the Wildlife Branch Director, the principle objectives of Wildlife Operations during spill response and cleanup are:

- Protect wildlife and habitats from contamination,
- Minimize injuries to wildlife and habitats from the contamination,
- Minimize injuries to wildlife from the cleanup,
- Provide best achievable care for injured wildlife, and,
- Document adverse effects that result from the spill and cleanup.

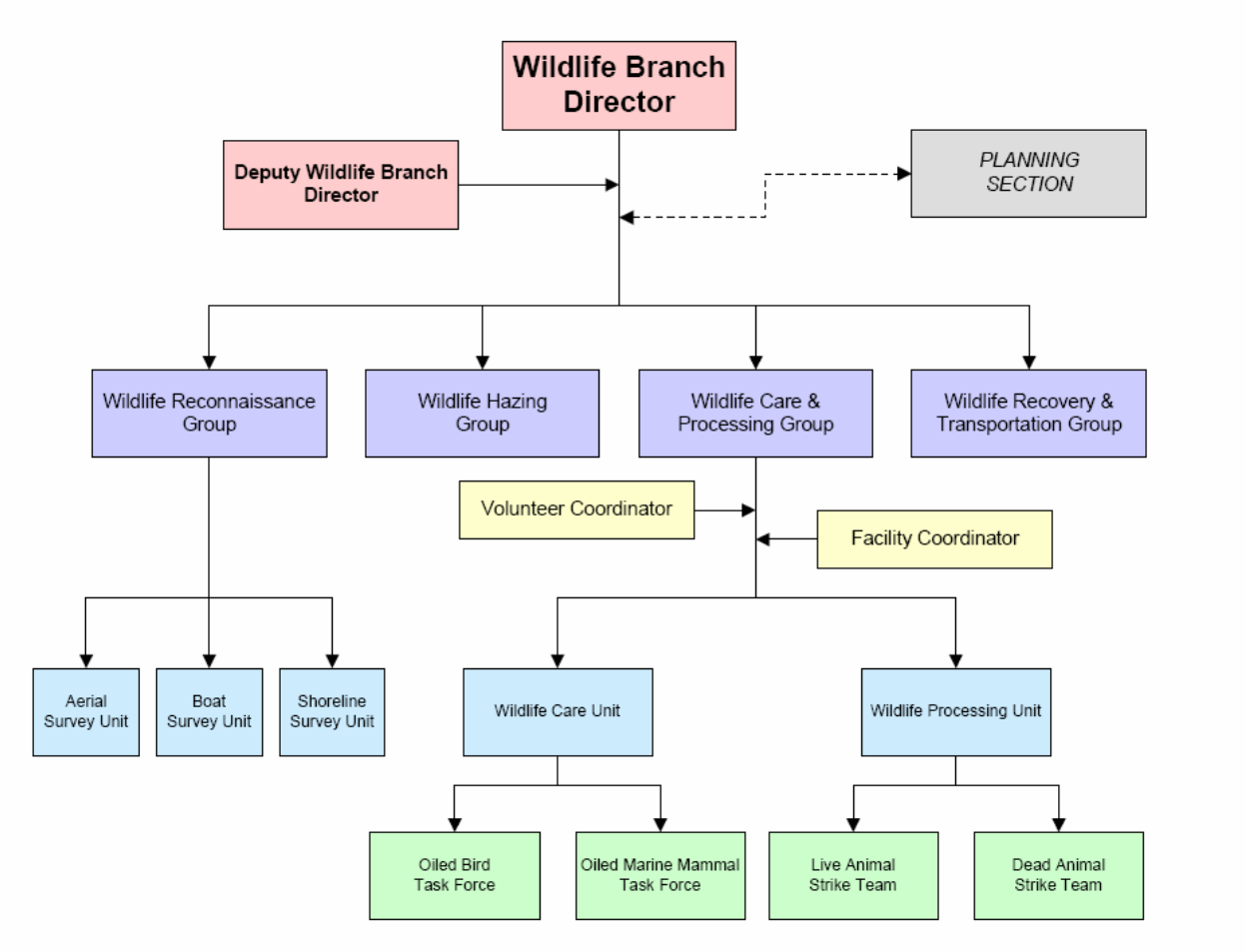
To ensure these objectives are achieved with maximum efficiency, the Wildlife Branch Director coordinates and manages the activities of all personnel in the Wildlife Branch who fall under the authority of the Unified Command during spill response. These include federal, state, and local agencies along with commercial and non-profit organizations performing wildlife protection and management.

Within the Wildlife Operations Branch, there are four Groups who report to the Wildlife Branch Director:

- Wildlife Reconnaissance (aerial, ground, and on-water reconnaissance of wildlife in the spill area),
- Wildlife Hazing,
- Wildlife Recovery and Transportation (search and collection), and
- Wildlife Care and Processing (rehabilitation and logging in).

Figure 2 shows the relationship of these Groups within the Wildlife Branch, and the Units and Teams that operate under each Group. The roles, responsibilities, and duties of these Groups are described in detail in Section 3600.6 below. It shows the Wildlife Branch structure in California is expanded beyond the two groups -- Recovery and Wildlife Rehabilitation Center Manager -- described in the U.S. Coast Guard Incident Management Handbook.

Figure 2: Wildlife Branch Organization



The Wildlife Response Plan describes:

- The statutory, policy and procedural bases for Wildlife Operations;
- The activation criteria and factors to consider when developing response actions; and
- The organizational infrastructure for wildlife response operations.

The Plan's Appendices include:

- A complete bibliography of the documents cited in the text;
- Detailed protocols;
- The Sea Otter Oil Spill Contingency Plan;
- Oiled Wildlife Care Network and volunteer information;
- Various forms to be used in Wildlife Operations; and
- Examples of special procedures.

Special Note: The Appendices are not included in the hardcopy version of the Area Contingency Plan. The Appendices can be found in their entirety on the OSPR web site at www.dfg.ca.gov/ospr/index.html.

The Wildlife Response Plan for California was developed jointly by a working group of government agencies and interested parties. The Working Group included personnel from: OSPR, U.S. Coast Guard, U.S. Fish and Wildlife Service, National Oceanic and Atmospheric Administration, California Department of Parks and Recreation, National Park Service, the California Coastal Commission, Oiled Wildlife Care Network, and industry. The Plan has been developed to meet the National Area Contingency Plan's Fish and Wildlife and Sensitive Environments Plan requirements set forth in 40 CFR Part 300, Sections 300.210(c)(4), and to be used throughout California.

This plan has been designed to cover oil spills in marine waters. However, it is applicable to inland oil and non-oil spills as well. The organizational structure, roles and responsibilities remain the same, although some functions may be altered as appropriate.

3600.2.1 Federal and State Law Mandates

As part of the National Contingency Plan for Oil Spills, the Federal Oil Pollution Act of 1990 (OPA-90) requires that a Fish and Wildlife and Sensitive Environment Plan be developed, in consultation with the U.S. Fish and Wildlife Service (USFWS), the National Oceanic and Atmospheric Administration (NOAA), and other interested parties, including state fish and wildlife agencies (33 U.S.C. § 1321(d)(2)(M)). The plan must include "immediate and effective protection, rescue, rehabilitation of, and the minimization of risk of damage to fish and wildlife resources and habitat that are harmed or that may be jeopardized by a discharge." 40 CFR Part 300, Section 300.210(c)(4) sets forth the requirements for this plan as an annex to Area Contingency Plans. This Wildlife Response Plan has been written in conjunction with other sections of the ACP to address the Federal requirements.

In most respects, the fish and wildlife provisions of California's Lempert-Keene-Seastrand Oil Spill Prevention and Response Act (OSPRA) (Government Code §§ 8574.7, 8670.37.5) parallel or exceed the OPA 90 provisions for fish and wildlife protection during spill responses. Under OSPRA, OSPR's Administrator has several duties regarding living natural resources. The OSPR Administrator must:

- Develop contingency plans for the protection of fish and wildlife,
- Assess injuries to natural resources,
- Establish rescue and rehabilitation stations for oiled marine wildlife, and
- Require restoration plans for wildlife resources including habitat following spills.

OSPRA also provides for the establishment and funding of the Oiled Wildlife Care Network (OWCN) (Government Code § 8670.37.5) as an essential component of California's wildlife response capability . In addition, the OSPR Administrator has a statutory mandate to "ensure that, as part of the response to any significant spill, biologists or other personnel are present and provided any support and funding necessary and appropriate for the assessment of damages to natural resources and for the collection of data and other evidence that may help in determining and recovering damages." (Government Code Section 8670.7 (g)(2)).

3600.2.2 Natural Resource Trustees for Wildlife

Pursuant to Fish and Game Code Sections 1802 and 711.7, Department of Fish and Game is the lead state trustee agency for fish, wildlife, and their habitats. Other state trustee agencies that are most likely to participate in Wildlife Operations decisions and response activities are:

- Department of Parks and Recreation
- State Lands Commission (tide lands)
- Department of Water Resources
- State Water Resources Control Board
- Regents of the University of California (on university lands)

Pursuant to OPA 90 and CERCLA, the Governor delegated state trustee authority to the Director of Cal-EPA and the Secretary of the Resources Agency for resources within their purview.

Federal trustee agencies that are most likely to participate in Wildlife Operations decisions and response activities are as follows:

- Department of the Interior
  - National Park Service
  - U.S. Fish and Wildlife Service
- Department of Commerce
  - National Oceanic and Atmospheric Administration
    - National Marine Sanctuaries
    - National Marine Fisheries Service
- Department of Defense

The U.S. Coast Guard and the U.S. Environmental Protection Agency are not trustee agencies for natural resources, but are the lead federal agencies during a spill response and also participate fully in Wildlife Operations decisions.

In any spill, the responsible party or discharger is responsible to federal and state resource trustees, to federally recognized Indian tribes, and to foreign trustees, all of whom are empowered to enforce remediation and seek compensation for injuries to natural resources which have been caused by a discharge (40 CFR Part 300, Subpart G, and California Govt. Code Section 8670.1 et seq. and Fish and Game Code Sections 2014 and 12016).

Trustee agencies influence the response methods used so that wildlife operations comply with each trustee's governing laws and their obligations to preserve and protect wildlife and habitat. During a spill response, the wildlife trustee agencies will advise the Wildlife Branch Director about local wildlife resources, especially sensitive species or habitats, logistical consideration, and other issues that arise.

3600.2.3 Interagency Agreements Regarding Wildlife Response Activities

In an effort to provide a more efficient and coordinated response, principal federal and state fish and wildlife trustees have signed cooperative agreements regarding a variety of issues that arise during spills of oil and toxic substances. These issues include agency response roles, along with capture, treatment, rehabilitation, and release of injured wildlife. All of the agreements can be found in Appendix V. Following is a synopsis of the agreements.

The "Cooperative Agreement Between the California Department of Fish and Game and the U.S. Fish and Wildlife Service Endangered and Threatened Fish, Wildlife and Plants," pursuant to Section 6(c) of the Endangered Species Act of 1973 and the California Endangered Species Act of 1984, authorizes DFG to take federally endangered and threatened species during emergencies, without a permit, if such action is necessary. Those necessary actions are further defined in the Agreement in Appendix Va. The agreement also gives DFG and its agents, such as Oiled Wildlife Care Network (OWCN), permission to handle protected species (e.g. sea otters) during emergency spill response.

The "Memorandum of Understanding Designating California Department of Fish and Game as Primary Contact for Fish and Wildlife Issues in the Event of Oil or Toxic Substances Spill within the State of California" (Appendix Va) acknowledges that USFWS and DFG share trustee responsibilities for endangered species, migratory birds and migratory fishes. This document directs DFG to designate a primary contact person for support of the Unified Command regarding fish and wildlife issues in California during oil spill response. The stated duties of this person are to:

- Advise on and coordinate activities related to fish and wildlife problems and issues related to the spill;
- Advise and direct efforts to minimize injury to wildlife; coordinate efforts to recover and care for oiled wildlife;
- Maintain communication with USFWS; and
- Adhere to conditions of federal and state wildlife permits.

DFG entered into a similar agreement with National Marine Fisheries Service (NMFS) to govern the rescue and rehabilitation of pinnipeds (seals and sea lions), cetaceans (dolphins and whales), and sea turtles (Appendix Vb, "Memorandum of Agreement Between the California Department of Fish and Game Office of Oil Spill Prevention and Response and the National Marine Fisheries Service Southwest Region Regarding the California Marine Mammal Stranding Network and the Oiled Wildlife Care Network"). The Appendix gives specific instructions for coordinating with NMFS about dead and live mammal recovery or capture, mammal rescue attempts, transportation, rehabilitation, and the Marine Mammal and Turtle Stranding Report.

The primary purposes of the agreement with NMFS are (a) to ensure that pinnipeds, cetaceans, and sea turtles affected by oil spills in marine waters of the State receive the best achievable treatment and (b) to ensure the collection of sound biological and chemical data on such affected resources. The Agreement ensures consistency with NMFS guidelines and protocols on the rescue and release of live-stranded pinnipeds, cetaceans, and sea turtles and incorporates them into the OWCN protocols for response, rescue, rehabilitation and medical treatment of these animals, as outlined in the NMFS/OSPR Contingency Plan (Attachment A of the Memorandum). Other conditions include:

- The required use of the California Marine Mammal Stranding Network,
- The required use of OWCN personnel and facilities in the rescue and rehabilitation of pinnipeds, cetaceans, and sea turtles,
- Cooperative information and data exchange programs, and
- The development of training materials.

These duties correlate directly with the responsibilities of the Wildlife Branch Director.

The Bureau of Land Management, Department of Interior, the Resources Agency of California, California Department of Fish and Game and California Department of Parks and Recreation developed a Memorandum of Understanding that pertains to collaborative management of the California Coastal National Monument (islands, rocks, exposed reefs and pinnacles above mean high tide within 12 nautical miles from shore). (Appendix Vc).

The Oiled Wildlife Care Network, OSPR, and the Regents of the University of California on behalf of the Wildlife Health Center School of Veterinary Medicine University of California, Davis entered into a Memorandum of Understanding in which U.C. Davis agrees to provide administrative planning and management support for the OWCN. This includes managing all the participating OWCN rehabilitation organizations for wildlife recovery, rehabilitation, and processing. (Appendix Vd).

Because oil spills can cross state and national borders, agreements have been entered into with all the western states, British Columbia and Mexico. The Pacific States of Alaska, California, Hawaii, Oregon, Washington, and the Province of British Columbia entered into a Memorandum of Cooperation in June 2001. This Memorandum was developed to ensure effective coordination between the states and British Columbia in the event of a spill. (Appendix Ve).

International cooperation during spill responses is enabled by the MEXUSPAC, an accord signed by the United States and Mexico (Appendix Vf). This Appendix also includes information needed for spill responders to cross the international border, and information on transporting oiled wildlife back into the United States.

3600.3 PERSONNEL, EQUIPMENT, AND OTHER RESOURCES

3600.3.1 Personnel Safety

Worker safety must be considered before any wildlife reconnaissance, protection or retrieval effort is conducted. Safety hazards that may confront Wildlife Operations personnel include toxic vapors, fire hazard, hazardous weather and seas, unsafe footing, and injuries inflicted by wild animals. Therefore, all Wildlife Operations activities must conform to the Site Safety Plan for the response, and all personnel involved in Wildlife Operations must have appropriate job-specific safety training (e.g. HAZWOPER training) for the tasks to be performed. They must be adequately protected with the appropriate personal protection equipment (PPE) (such as skid-resistant boots, safety glasses, nitrile gloves, tyvek overalls, etc.). Those people involved with animal handling should be trained in techniques that ensure worker safety and present the least amount of stress to wildlife (Chen, Valet and Camlin, 1995). OWCN manuals contain detailed protocols followed by OWCN personnel, describing the capture, transport, and rehabilitation of oiled wildlife (OWCN 1998a and 1998b).

3600.3.2 Office of Spill Prevention and Response (OSPR)

Because DFG is the lead state trustee agency for wildlife resources in California, barring any unusual circumstances, OSPR will take the lead as Wildlife Branch Director in implementing Wildlife Operations because DFG personnel have required training and expertise. Further, as discussed previously, OSPR is required by state statute to protect California wildlife in the event of a marine oil spill. As principal developers and custodians of information about environmentally sensitive sites listed in the ACP, OSPR biologists are uniquely knowledgeable about marine and coastal wildlife and are experienced with wildlife issues that arise during spill responses. Thus, in a spill, OSPR will bear significant responsibility for informed and timely decisions about the allocation and deployment of specialized wildlife protection, rescue, and rehabilitation resources. This responsibility includes coordination with the other trustees to make decisions about staffing, equipment, beach access logistics, and wildlife-rehabilitation contractors. For these reasons, the Wildlife Branch Director has been an OSPR employee in all large California spill responses since OSPR was established.

3600.3.3 Oiled Wildlife Care Network (OWCN)

In addition to OSPR, OWCN, a statewide cooperative system of specialized wildlife health centers and organizations set up by statue (see Government Code § 8670.37.5), is integral to Wildlife Operations. OWCN maintains a corps of veterinarians, paid staff, and professionally-trained volunteers. OWCN has enlisted 28 academic, private non-profit, and rehabilitation organizations to actively participate during oil spill responses, and consists of 12 permanent wildlife care facilities along the California coast (see Figure 3, Table 1, and Appendix IIc) for

use during a spill (Mazet et al., 1999). During a spill if a particular wildlife care facility becomes overwhelmed additional facilities can be utilized. For more information on the OWCN, see Appendix IIa and the OWCN web page at www.owcn.org.

When California wildlife is affected by an oil spill, OWCN responders integrate with the Wildlife Branch, within the Incident Command Structure. OWCN responders retrieve oiled animals, evaluate animals' need for treatment, and remove the toxic products from the animals. They then rehabilitate impacted animals, locate suitable release sites, release animals, and monitor post-release survival. OWCN also oversees documentation and collection of evidence samples from all collected wildlife (live and dead) to assist in response and subsequent assessment phases.

3600.3.4 Volunteers

Wildlife Operations personnel may include "pre- trained" volunteers, "convergent" volunteers, or both, whose training may range from none to highly skilled. Most volunteers are provided by OWCN and managed by the OWCN Coordinator. Volunteer management efforts for tasks unrelated to the OWCN volunteers (e.g. Shoreline Cleanup Assessment surveys) are coordinated by the OSPR Statewide Volunteer Coordinator. During a spill, the Wildlife Branch Director, in coordination with the Wildlife Care and Processing Group Supervisors, will determine the need for volunteer assistance and direct activities of the OWCN and OSPR Volunteer Coordinators.

The Coordinators will establish volunteer outreach mechanisms (i.e. toll free numbers, public information announcements, press releases) and manage the influx of convergent and pre-trained volunteers. Wildlife Processing and Care volunteers must have HAZCOM training (which identifies hazards in the workplace) as approved by the OSPR Industrial Hygienist. Volunteers conducting Recovery and Transportation must have current 24 hour HAZWOPER training, unless otherwise approved by the OSPR Industrial Hygienist.

Volunteers who wish to assist with oiled wildlife will be jointly screened by the OWCN and OSPR Volunteer Coordinators. Table 1 and Appendix IIc lists organizations that participate in the Oiled Wildlife Care Network and can provide "pre-trained" volunteers as needed through the Wildlife Operations Branch. Appendix IIb, Oiled Wildlife Care Network and Volunteers, contains all of the details of volunteer management specific to oiled wildlife care.

If there is a need for a Volunteer Operations Center operated by an organization participating in OWCN, the State Volunteer Coordinator and the OWCN Volunteer Coordinator will work directly with the participating organization's volunteer coordinator. The participant organization's volunteer coordinator must be trained by both the State Volunteer Coordinator and the OWCN Volunteer Coordinators on the protocols for volunteer activation during an oil spill response. If the participating organization does not have a designated volunteer coordinator then the Wildlife Rehabilitation Staff will take on these responsibilities.

Figure 3: Map of Oiled Wildlife Care Facilities and Participating Organizations

Table 1: Participant Organizations and Centers of the Oiled Wildlife Care Network

Organization	Primary Response Facility	Activation	Maximum Oiled Animal Caseload
North Coast Marine Mammal Center, Crescent City	*	Nov. 1995	15 marine mammals
Humboldt State University, Arcata	*	Jan. 1997	400 birds
Santa Rosa Bird Rescue Center, Santa Rosa		Aug. 1995	25 birds
Point Reyes Bird Observatory, Pt. Reyes		August 2003	No animal care facilities
Wildcare, San Rafael		Aug. 1995	25 birds
The Marine Mammal Center, Sausalito	*	Dec. 1995	40 marine mammals 10 sea otters
International Bird Rescue Research Center, Cordelia	*	May 2000	1000 birds
Wildlife Health Center, UC Davis, School of Veterinary Medicine, Davis		June 1995	Intensive care unit: birds and endangered species as needed
Lindsay Wildlife Museum, Walnut Creek		Aug. 1995	50 birds
Peninsula Humane Society, San Mateo		Aug. 1995	50 birds
UC Santa Cruz, Santa Cruz	*	Aug. 2000	400 birds
Marine Wildlife Veterinary Care Research Center, Santa Cruz	*	July 1997	125 sea otters, 50 birds, 10 other marine mammals
Native Animal Rescue, Santa Cruz		Aug. 1995	25 birds
Monterey Bay Aquarium, Monterey		Apr. 1997	10 sea otters
Monterey SPCA, Monterey		Mar. 1996	25 birds
Pacific Wildlife Care, Morro Bay	*	Apr. 2000	200 birds
UC Santa Barbara, Santa Barbara	*	Pending	100 birds
Santa Barbara Wildlife Care Network, Santa Barbara		Aug. 1995	50 birds
Santa Barbara Marine Mammal Center		Pending	Pending
The California Wildlife Center, Malibu		Pending	200 birds
International Bird Rescue Research Center, San Pedro	*	Sept. 1999	1000 birds
The Marine Mammal Center at Fort MacArthur, San Pedro	*	Nov. 1995	20 marine mammals
Aquarium of the Pacific, Long Beach		Nov. 2001	No animal care facilities
Wetlands and Wildlife Care Center of Orange Co., Huntington Beach	*	Mar. 1997	400 birds
Friends of the Sea Lion Marine Mammal Center, Laguna Beach		Aug. 1995	5 marine mammals
Sea World of California, San Diego	*	Dec. 1996	20 marine mammals including sea otters; 400 birds; sea turtles as needed
Project Wildlife, San Diego		Aug. 1995	25 birds
Wildlife Assist, San Diego		July 2003	No animal care facilities

3600.3.5 Wildlife Contractors/Experts.

There are a number of experts and contractors that can assist with Wildlife Operations e.g. for wildlife reconnaissance. OSPR maintains this list of experts in a separate document titled "List of Experts and Contractors for Wildlife Operations".

3600.3.6 Responsible Party

A responsible party (contingency plan holder) can name OWCN in its contingency plan(s) as its identified wildlife response organization. The responsible party may include other wildlife care staff in Wildlife Operations Branch positions through the Unified Command. All personnel and equipment supplied by the responsible party to Wildlife Operations will be managed by the Wildlife Branch Director under the Unified Command.

3600.3.7 Specialized Wildlife Operations Equipment

Some equipment used within the Operations Section (e.g., booms, skimmers, and shallow water boats) will serve the mission of Wildlife Operations and can be drawn from industry and response-organization inventories. Some equipment, however, is specialized for Wildlife Operations and dedicated to that purpose. See Appendix Id for a list such equipment.

OSPR has equipment such as the following, available for Wildlife Operations:

- Air boats;
- All-terrain vehicles (ATVs);
- Capture boats;
- DFG fixed wing airplane;
- Hazing equipment and capture equipment (various);
- Mobile vet lab;
- Wildlife care trailer;
- Wildlife supplies trailer (contain hazing, capture, and transportation equipment);
- Wildlife Transport Trailer
- Communications Trailer

Additional equipment can be obtained from DFG, other government agencies, OWCN, and response contractors. For example, the equipment that OWCN can provide includes four-wheel drive vehicles, ATVs, a rigid-hull inflatable boat, hand-held dip nets, herding boards, spotlights, animal carriers, cages, crates, protective clothing, all-weather gear, transport vehicles, and medical supplies.

3600.3.8 Tiered Level Response Resources

Activation of personnel and equipment is based on a number of variables, but primarily on anticipated adverse effects upon wildlife. The development of Wildlife Operations' initial response strategies and their re-evaluation throughout the spill response is an iterative, dynamic

process that calls for good information, knowledge, experience and judgment. In California, Wildlife Operations experiences have been extremely varied, ranging from a catastrophic release during migratory shorebird and waterfowl season; to "mystery" spills during which very little oil reached the shore, yet significant numbers of seabirds were affected; to a more "typical" spill of a few barrels of petroleum resulting in a few dozen wildlife casualties.

OSPR has developed a Wildlife Operations Resource table (Table 2) to be used as a guide to meet a variety of spills and Wildlife Operations needs. Three levels of Wildlife Operations personnel and equipment response are shown in Table 2. Most often Wildlife Operations will mobilize personnel and equipment at the lowest level, i.e., Level I. Response for each spill should be tailored on a case-by-case basis. Some extraordinary circumstances (e.g., a tanker grounding and rupture, with a known discharge) would justify Level II or III (highest) mobilization at the outset. Wildlife Operations will notify the Unified Command immediately of changes in the deployment of personnel and equipment as they occur. As the Unified Command gets established Wildlife Operations will be integrated.

Table 2: Wildlife Operations Resource Table - Recommended Tiered Level Response of Personnel and Equipment for Wildlife Operations

This table should be used as a general guide for Wildlife Operations resource needs during the initial response prior to development of an Incident Action Plan. This table has been developed based on experience from past spills but is based primarily on expected wildlife casualties as outlined for each tier level. This table represents dedicated equipment to be provided by OSPR and OWCN and staffing must be provided by OSPR, OWCN, and other natural resource trustee agencies. OSPR and OWCN will work in conjunction with other trustees and land managers to decide levels of response, resources needed, and resources available. Wildlife Operations resources should be tailored specifically to meet the needs of each incident. **NOTE: For incidents where marine mammals are affected, those categories indicated by a * would double in number to account for activation of additional personnel and equipment so separate efforts can be devoted to birds and mammals.**

LEVEL I Incidents where Wildlife Operations projections are for dozens of marine birds or mammals impacted	
Staff Wildlife Branch Director Wildlife Recovery & Transport Group Supervisor (OSPR or OWCN) (1)* Wildlife Recovery & Transport Unit Staff (Management agency personnel or OWCN) (2-8)* Wildlife Care & Processing Group Supervisor (OWCN) (1) (also acts as Wildlife Recovery & Transport Group Supervisor) Wildlife Care Unit Leader (OWCN) (1) Wildlife Care Unit Staff (OWCN) (4-6)* Wildlife Processing Unit Leader (OWCN) (1) Wildlife Processing Unit Staff (OWCN) (1-3) Wildlife Hazing Group Staff (OSPR), (3) Volunteer Coordinator (OSPR) (1) Volunteer Coordinator (OWCN) (1)* Facilities Coordinator (OWCN) (1)* Administrative Coordinator (OWCN) (1) GIS Technical Specialist (OSPR) (1) *	Equipment Regional primary care facility (OWCN)(1)* ATVs (OWCN or OSPR) (2, one of which for hazing) Vehicle - One-ton truck Vehicle - Wildlife recovery (OWCN) (2)* Vehicle - Wildlife transport (OWCN) (1)* Air boat (OSPR), (1, for hazing) Boat - Capture/reconnaissance (OSPR/OWCN) (1)* Sonic Buoy (OSPR), (1, for hazing)

TABLE 2 CONTINUED **LEVEL II** Incidents where Wildlife Operations projections are for up to low hundreds of marine birds or mammals. All of the resources shown in Level I **plus:**	
Staff Deputy Wildlife Branch Director (1) Wildlife Recovery & Transport Group Supervisor (OSPR/OWCN) (1) Wildlife Recovery & Transport Unit Staff (Management agency personnel or OWCN) (4-8)* Wildlife Care Unit Staff (OWCN) (6-10)* Wildlife Veterinarian (OWCN) (1)* Wildlife Processing Unit Staff (OWCN) (2-6) Volunteer Coordinator (OWCN) (1)* Administrative Staff (OWCN) (1-2)* Wildlife Hazing Group Staff (OSPR) (5) Reconnaissance Group Staff (15) Wildlife Aerial Response Team (3)	Equipment 2 ATVs (OSPR), (1 of the 2 ATV's for hazing,) Vehicle - One-ton truck Vehicles - Wildlife transport (OWCN) (1-2)* Trailer - Wildlife Supplies (2) Trailer - Wildlife stabilization (OSPR/OWCN) (1)* Boats - Capture/Reconnaissance (OSPR) (3) Air boat (OSPR), (2-3, 1 or 2 of which are for hazing) DFG Fixed Wing Aircraft (1) Helicopter Support (OSPR), (for hazing) Sonic Buoy (OSPR), (2 for hazing)
LEVEL III Incidents where Wildlife Operations projections are for high hundreds or thousands of marine birds or mammals. All of the resources shown in Levels I and II **plus:**	
Staff Deputy Wildlife Care & Processing Group Supervisor (1) Wildlife Processing Unit Staff (OWCN) (2-15) Wildlife Care Unit Staff (OWCN) (6-15)* Wildlife Veterinarian (OWCN) (1-2)* Wildlife Recovery & Transport Unit Staff (Management agency personnel or OWCN) (4-8)* Administrative Staff (OWCN) (1-2)* Wildlife Hazing Group Staff (OSPR), (10-15) Veterinary Pathologist (1)	Equipment Facility - Regional primary care facility (OWCN)(1-2)* Trailer -Wildlife stabilization (OSPR/OWCN) (1-2)* Boat – capture (4) Air boat (OSPR), (4-5, one or two of which for hazing) Trailer - Wildlife Supplies (1) ATV (OSPR), (6, 2 of which for hazing) Helicopter Support (OSPR), (1, one of which is for hazing) Sonic Buoy (OSPR), (10 for hazing)

3600.3.9 Wildlife databases

Throughout California, wildlife resources and critical habitats that are sensitive and vulnerable to oil have been identified through the ongoing, systematic collection of baseline data by OSPR, Area Committees' Sensitive Site and Geographic Response Subcommittees, and other agencies. These baseline data are used to project the level of risk to sensitive wildlife resources under different spill scenarios (Bonnell et al., 1993, Ford and Bonnell, 1995). The data include annual aerial censuses of major marine bird colonies (*e.g.*, Carter et al., 1996, etc.), intermittent comprehensive breeding marine bird surveys (Carter et al., 1992), at-sea surveys of resident and migratory marine birds and mammals, semi-annual sea otter surveys, annual pinniped rookery censuses, weekly or monthly shoreline surveys at the National Marine Sanctuaries (Roletto et al., 1998), and sensitive habitat and wetlands identification (RPI, 1994, 1996, 1998).

Relevant baseline data are compiled by OSPR in computerized Geographic Information Systems (GIS). Critical wildlife habitats in the GIS and associated protection strategies in the ACP can be quickly identified and plotted. For example, salt marshes are delineated, along with recommended booming configurations to protect them. GIS coverages and resource information in NOAA's Environmental Sensitivity Index (ESI) can be produced on maps. In advance of a spill, these maps can be a planning tool to determine the relative sensitivity of each coastal

region of California at risk from the spill. The data and maps also can be used in conjunction with those developed from real-time data during on-scene reconnaissance to evaluate the likely wildlife injuries and to guide the response decisions of the Wildlife Branch, Planning Branch, and Unified Command in the early stages of a spill. Wildlife care facilities and spill response equipment have been planned and located using information from these databases.

3600.3.10 GIS Resources

Within minutes after receiving data from an aerial, boat or shoreline survey team, an OSPR GIS specialist can create a map that depicts operational divisions and resources at risk on open water and shorelines using pre-established grid block units, and provide it to the Unified Command. This map will assist the Wildlife Branch Director in identifying and ranking wildlife response strategies. For example, site-specific booming or hazing actions may be recommended based on this information. Also, the presence of an especially sensitive wildlife species or habitats in a spill trajectory might prompt or preclude the use of dispersants or other Applied Response Technologies. The integration of pre-spill (baseline) data and reconnaissance information provide the Wildlife Branch Director and the Planning Section Chief with the ability to develop a common understanding of wildlife resources at risk during response, and strategies to protect them. Even in small spills, a GIS Specialist is needed early in the response to provide the types of maps listed above.

3600.3.11 Remote Sensing Data

A combination of satellite and ground-based radar images from consecutive days can be used to derive information about ocean surface currents. This information can help predict wildlife strandings, potential oiling of wildlife, or both. Types of remote sensing data that can be used include: Coastal Radar Data (CODAR), Satellite Synthetic Aperture Radar (SSAR), Advanced Very High Resolution Radiometer (AVHRR), and the Moderate Resolution Imaging Spectroradiometer (MODIS).

3600.4 ACTIVATION OF WILDLIFE OPERATIONS

3600.4.1 Activation of OSPR's Wildlife Operations Resources

OSPR's early Wildlife Operations will be guided by the ACP, and then will be integrated with the Unified Command as it is formed. Because OSPR has the mandate and the capacity, the Unified Command may anticipate that OSPR will mobilize its wildlife response resources and begin Wildlife Operations immediately upon notification of a spill. When taking early actions, OSPR will maintain close coordination with the evolving Unified Command. Such early but prudent initiation of a wildlife response will ensure timely mobilization of dedicated resources, will minimize adverse effects upon wildlife, and will contribute to effective cost containment. As soon as feasible, but in any event after the first 24 hours of a spill, the Wildlife Branch Director will direct the development of the Wildlife Operations element of the Incident Action Plan, will submit it for review and approval by the Unified Command, and will begin coordinating with the other trustee agencies, as warranted.

3600.4.2 Activation of OWCN Wildlife Operations Resources

OWCN responds hand-in-hand with OSPR during Wildlife Operations and, if needed, activation can be virtually simultaneous. OWCN may be activated by OSPR's Duty Officer (at OSPR's Headquarters Operations Center in Sacramento), by the State On-Scene Coordinator, or by the Responsible Party (if OWCN is listed in RP's contingency plan). Through OWCN, dedicated wildlife operations equipment and specially-trained response personnel can be deployed immediately in combinations dictated by spill-specific circumstances (see Table 2). In consultation with the Unified Command and the Wildlife Branch Director, the OWCN Director (or his or her designee) may begin early notification actions of OWCN response personnel and facilities, placing them on stand-by, and enabling them to prepare their facilities.

OSPR and OWCN can be contacted directly regarding spill notification and Wildlife Operations response, or through USCG at any one of the following telephone numbers:

DFG OSPR/California Department of. Parks and Recreation Dispatch (NORCOM):		(916) 358-1300
OWCN:	General:	(530) 752-4167
	Response Pager	(916) 556-7509
USCG-National Response Center:		(800) 424-8802
USCG-Marine Safety Office (MSO) San Francisco Port Area:		(415) 399-3545/3547
USCG-MSO Los Angeles/Long Beach Port Area:		(562) 980-4444
USCG-MSO San Diego Port Area:		(619) 557-5860 (day)
		(619) 557-5870 (eve)

3600.4.3 Criteria for Activating Wildlife Operations for Oiled Wildlife Events when there is no reported Oil Spill

OSPR or OWCN staff members sometimes get notified directly about oiled wildlife when there has been no report of an oil spill. The following criteria to activate Wildlife Operations in this situation (i.e. when there is no reported oil spill but reports of oiled wildlife) are guidelines based on actual spill response experience. These criteria are primarily for birds because birds are more likely to strand before mammals, but they apply to both birds and mammals.

OWCN's pager should be contacted (916- 556-7509) and OWCN should contact NORCOM to notify the OSPR on-call staff when:

- Greater than 2 live oiled animals or greater than 5 dead oiled animals are reported from the same general location in a single day, or
- There are reports from 3 consecutive days of 1 oiled animal reported per day from the same general location.

The on-call OSPR warden and biologist, in consultation with OWCN, will determine if there is a need to activate Wildlife Operations and whether to notify the Office of Emergency Services (OES). These actions will occur on a case-by-case basis.

OES should be contacted to notify other response agencies and an OES Spill Notification Report should be filed when:

- 5 oiled animals have been reported in a single day from the same general location.

3600.4.4 Criteria for Activating Recovery and Transportation Teams:

During a response when Wildlife Operations has not been activated or is only partially activated, as a guide, OSPR's criteria to activate Recovery and Transportation Teams is:

- If 3 or more oiled animals from a similar geographic area are reported. The number of animals, degree of oiling, weather, sea states, oil location, and area(s) in which animals were observed or collected will determine whether a single team or multiple teams will be activated and for how many days.

3600.4.5 Criteria for Activating Heightened Awareness Protocols for Recovery and Transportation Teams:

As a guide, during a response, "heightened awareness protocols", (Appendix IIIb for example) requiring more intensive Recovery and Transportation activities should be developed and implemented when:

- More than 20 oiled birds or mammals are observed in a similar geographic area within a week;
- And/or if a spill occurs in the vicinity of a National Marine Sanctuary.

3600.4.6 Criteria for Deactivating Recovery and Transportation Teams:

As a guide the Wildlife Branch Director, in consultation with the Planning Chief, the OWCN Response Veterinarian, and other trustee agencies, may deactivate Recovery and transportation for a given operational division when:

- Fewer than 3 oiled animals (live, dead or any combination) are recovered within any operational division for 2 consecutive days.

The Wildlife Branch Director may extend recovery and transportation within a division or geographic area, if warranted by a change in weather or sea state conditions (e.g. on-shore winds, extreme tidal fluctuations, or both) that could likely bring more oiled wildlife ashore.

3600.5 PREVENTING AND REDUCING IMPACTS TO WILDLIFE DURING SPILL RESPONSE

3600.5.1 Considerations for Implementing Response Countermeasures (Offshore and Shoreline Oil Recovery and ART's)

The primary objectives of Wildlife Operations are to provide the best achievable care to

impacted wildlife and to minimize wildlife losses, which includes preventing injury to wildlife or habitats from both the oil and from the implementation of response countermeasures. Response countermeasures include mechanical offshore recovery methods, applied response technologies (ARTs, such as dispersants), and shoreline recovery techniques. The application of these countermeasures, whether for wildlife protection or for other aspects of spill response, should at all times be guided by the sensitivity and vulnerability of wildlife and habitats in the spill response area. Similarly, staging areas and site access for equipment and response personnel should be selected carefully to avoid collateral impacts.

The simplest means of protecting marine wildlife from an oil spill is to prevent oil from reaching areas where wildlife are concentrated, through coordination with the Planning and Operations Sections. In many cases, this can be accomplished by tailoring the use of standard spill response equipment and techniques to increase protection of wildlife. The Planning Section, with input from the Wildlife Branch when possible, will evaluate spill response countermeasures for their potential to cause collateral harm to wildlife, and propose the alternative that is least harmful to wildlife and habitats.

In close coordination with the Resources at Risk Specialist in the Planning Section's Environmental Unit, the Wildlife Branch Director should identify known wildlife concerns (e.g., areas containing listed species) and use available wildlife reconnaissance data (e.g. identification of large flocks of pelagic birds) to help the Planning Section evaluate environmental tradeoffs from different response strategies. This must be accomplished quickly but must also be consistent with the overall response needs.

Any time ARTs (e.g., dispersants or in-situ burning) are considered, special attention should be paid to their potential effects on wildlife, their method of application, and monitoring during application. Dispersants should be applied in such a way as to avoid, to the maximum extent practicable, spraying seabirds outside the oil slick being treated, and should not be applied directly to marine mammals within or outside of an oil slick. There is a separate California Dispersant Use Plan that details conditions and constraints for dispersant use. If in-situ burning is considered, the plan should include wildlife hazing within the burn area, or should include capturing wildlife if animals are already oiled. During a spill response approval to use dispersants or in-situ burning would be evaluated and approved of by the Unified Command on a case-by-case basis.

3600.5.2 Reducing Human-Related Disturbances to Wildlife During Spill Response

In order to recover as many spill-affected animals as possible, the Wildlife Branch Director should identify actions to reduce human-related disturbances of wildlife along oiled beaches, shorelines, and known stranding areas Oiled or injured wildlife typically will not strand on a shoreline that has a constant intensive amount of human activity. This causes the wildlife to stay at sea or search for more isolated locations. A delay in stranding can cause a delay in capture and subsequent rehabilitation, which, in turn, can decrease chances of survival. Thus, when feasible, it is advisable for the Unified Command to close such areas to the public, and allow access only to response personnel designated to capture oiled wildlife.

To minimize collateral damage, the Wildlife Branch Director must identify locations were response actions may disturb wildlife. In the spring and summer months, personnel involved in response activities, particularly on islands and along shorelines, should be alerted to the presence of nesting birds, bird colonies, pinniped breeding, pupping, and haul-out areas, and cautioned about salt marshes, which are vulnerable to the effects of disturbances and trampling. Sensitive (e.g., breeding) areas should be posted and access should be restricted. The Wildlife Branch Director should consult and work in conjunction with the other trustee agencies and land managers (e.g. the National Park Service, California Department of Parks and Recreation, National Marine Sanctuaries, and National Wildlife Refuge System) in order to reduce or eliminate collateral damages to cultural and natural resources during response efforts.

Both response personnel and the public should be instructed not to attempt to capture, disturb, or dispose of oiled wildlife. The public should also be alerted (via the Joint Information Center) to leave both live stranded animals and dead animals in place and undisturbed so that they may be retrieved by trained response personnel. The locations of live stranded animals can be flagged by cleanup personnel to alert wildlife recovery teams and aid in expedited capture.

3600.5.3 Wildlife Hazing

Wildlife hazing involves actions to keep wildlife away from oil and cleanup operations. If warranted, hazing activities are begun to prevent animals from establishing or continuing regular use patterns within a contaminated area. If adverse effects upon wildlife are deemed to be unavoidable, given the predicted movement of oil in the hours and days following a discharge, then hazing can be used with little risk of worsening those adverse effects. Hazing should always be considered in heavily oiled habitats, particularly when clean sites are present in the area. Hazing is likely to be most effective when birds are concentrated in coastal lagoons, estuaries and bays. Hazing is likely to be ineffective or counterproductive if the spill area is too large to focus deterrent actions or if animals are likely to be pushed into oiled habitat. Wildlife that has already been oiled should not be dispersed, because this can lead to the introduction of oiled animals into uncontaminated areas and populations. Rather, oiled animals should be captured as soon as practical.

Once oiled, habitats that have been traditionally attractive to wildlife may be candidates for hazing actions since wildlife often continue to use their traditional sites even when an area is oiled. If oil-free and disturbance-free habitats are known to be available in the vicinity and traditional use areas are oiled, hazing may protect wildlife (Greer and O'Connor 1994, Thomas 1994, USDA 1997a, 1997b, 1997c).

In addition to the benefits to living natural resources, there is also a strong economic incentive for hazing. For example, in past California spills, the average cost to clean and care for each oiled bird has been about $500 or more (Jessup 1997). Therefore, successfully hazing of only 300 to 400 birds that might otherwise become oiled could save a lot in rehabilitation costs.

Hazing devices include both visual and auditory techniques. A variety of hazing devices are available and can be deployed to meet the situation, including helicopters, fixed-wing aircraft,

propane cannons, shell crackers, bird bombs, screamers, launchers, airboats, ATVs, sonic buoys, mylar tape, lasers, flags, distress and alarm calls, and effigies. Specialized hazing equipment, hazing techniques, and special hazing considerations for wildlife are described in detail in the General Wildlife Hazing Plan for Oil Spills in California included in Appendix IIIf.

Hazing activities must take place only under the authority and oversight of trustee agencies, in coordination with the Unified Command. The recommendation to haze will be guided by site-specific and species-specific factors present at the time of the spill, and availability of proven hazing techniques. The Wildlife Hazing Group (Figure 2) is directed by the Hazing Group Supervisor (for duties see Section 3600.6.3) who reports to the Wildlife Branch Director.

3600.6 WILDLIFE OPERATIONS BRANCH ORGANIZATION: POSITION ROLES, RESPONSIBILITIES & DUTIES:

Within ICS the response organizational structure and the response itself grow to fit the level necessary for each specific incident. For that reason, in the following sections when a specific ICS position is discussed, readers should realize positions and duties may be combined (or not needed).

The Wildlife Branch includes the following Groups: Wildlife Reconnaissance, Wildlife Hazing, Wildlife Recovery and Transportation, and Wildlife Care and Processing, which operate under the direction of the Wildlife Branch Director. This structure is expanded beyond the structure described in the USCG Incident Management Handbook, which has only two groups (Recovery Group and Wildlife Rehabilitation Center Manager Group). Figure 2 in the Introduction and Background Section, shows the relationship of the four Groups within the Wildlife Branch, along with the units and teams that operate under each Group.

Duties and issues that relate to a specific position are listed under that position in the sections that follow. General Duties that apply to the Wildlife Branch Director and each Group Supervisor and Unit Leader include but may not be limited to:

- Oversee safety of personnel
- Implement check-in and check-out procedures (includes identifying check-in location(s))
- Receive briefings from immediate supervisor and acquire work materials
- Provide information for wildlife response planning
- Implement the assignments of the current Incident Action Plan
- Develop the section-specific portion of the Incident Action Plan for the next operational period (ICS forms 204 and 215, see Appendix IVb)
- Supervise the operations (organize, assign and brief subordinates)
- Administrative support
- Documentation
- Establish and disseminate communications protocols for timely information gathering and reporting
- Determine resource needs and communicate to the Logistics Section through the Wildlife

Branch Director, and confirm dispatch and estimated time of arrival of staff and supplies
- Assemble and disassemble Strike Teams and Task Forces as necessary
- Identify resources that can be released and develop/implement Wildlife Demobilization Plan as directed
- Maintain Unit and Activity Logs (ICS 214)

3600.6.1 Wildlife Branch Director Duties

All California Wildlife Operations during spill response are directed by the Wildlife Branch Director, who supervises Wildlife Branch operations. The Wildlife Branch Director should be a representative of one of the wildlife resource trustee agencies (see Section 3600.2, above. See also Appendix Ib, Tips and Considerations for the Wildlife Branch Director). In addition to the general duties listed in Section 3600.6 above, the Wildlife Branch Director's duties include but are not limited to:

- Supervising the four Groups within the Wildlife Branch: Wildlife Reconnaissance (coordinating aerial, shoreline, and on-water wildlife surveys); Wildlife Hazing; Wildlife Care and Processing (vet services, establishing rehabilitation center(s) and logging in); and Wildlife Recovery and Transportation (coordinating search and collection and transportation of wildlife),
- Updating the Unified Command, Operations Chief, Environmental Unit (Planning Section), Information Officer, and Liaison Officer of wildlife at risk and spill related wildlife statistics (e.g. numbers of dead/live oiled birds),
- Coordinating with the Sampling Specialist in the Planning Section, Environmental Unit regarding wildlife samples being collected by Wildlife Operations personnel,
- Coordinating with the various land managers and/or trustee agencies (refer to ACP Planning Section, Environmental Sensitivity Indices, Site Summary Sheets for land manager/trustee contact information),
- Identifying methods to minimize collateral damage to wildlife and habitat from recovery, transportation, and reconnaissance operations,
- Coordinating the OWCN and overseeing activities of any other private wildlife care groups in addition to OWCN, including those employed by the RP,
- Updating the media as requested by the Unified Command, and
- Providing input at the Pre-Tactics meetings.

Details of principal duties:

3600.6.1.1 Safety

The Wildlife Branch Director oversees personnel safety and is ultimately responsible for ensuring that each Wildlife Operations task is performed safely and properly by qualified personnel. Because wildlife and habitat resources are sensitive and because there are potential dangers when working with wild animals, all Wildlife Operations personnel must receive

specialized training, on such topics as animal handling, so they may safely and competently complete of their assignments.

3600.6.1.2 Staffing and Resources

The Wildlife Branch Director must determine resource needs and communicate those needs through the Operations Chief to the Logistics Section and the Resources Unit in the Planning Branch (refer to Table 2, Wildlife Operations Resource Table, for staffing recommendations). To help keep track of Wildlife Operations personnel availability, refer to Appendix IVa, for examples of staff-availability job aids and forms. The Wildlife Branch Director must prepare information needed for work order forms (ICS 215 and 204) for Incident Action Plan preparation and logistics tracking. Form 215 is usually started in the Pre-Tactics Meeting, and is finalized at the Tactics meeting. The information from the 215 form is summarized in the ICS 204 form when the Planning Section prepares the IAP. When submitting 215 forms, the Wildlife Branch Director must clearly indicate which resources are already procured (e.g. resources provided by OWCN) or are on order, and provide estimated time of arrivals. Refer to Appendix IVb for examples of completed ICS 215 and 204 forms.

Even in small spills, the Wildlife Branch Director should request a GIS Specialist early in the response to provide the maps depicting operational divisions and resources at risk on open water and on shorelines. These maps will assist the Wildlife Branch Director in identifying and ranking wildlife response strategies.

If calls from the public are coming in regarding observations of oiled wildlife, consider designating a phone line as a hotline for the public to report their observations. The Wildlife Branch Director should assign staff to regularly check (e.g. once every two hours) and respond to the calls. The information will need to be coordinated with the Recovery and Transportation Group Supervisor. See Appendix I-f, Example Instructions for Bird Hotline.

Depending on the spill size, some duties of the Wildlife Reconnaissance Group teams may be integrated with Wildlife Recovery and Transportation teams or Shoreline Cleanup Assessment Teams, although this is not preferable. Combining duties of Groups is not effective or desirable because these Groups have different 1) objectives, 2) types of information to collect, 3) survey methods, 4) speeds of data collection, 5) and reporting deadlines.

There are a number of experts and contractors who can assist with Wildlife Operations, e.g. for wildlife reconnaissance (OSPR maintains this list in a separate document titled “List of Experts and Contractors for Wildlife Operations”).

3600.6.1.3 Information Flow

The Wildlife Branch Director must update the Unified Command (through the SOSC), Operations Chief and Planning Section (Situation Unit and Environmental Unit) of adversely affected wildlife and wildlife at risk. This includes keeping the Unified Command informed, through the Situation Unit in the Planning Section, about the status of wildlife. This information

is also relayed to the Liaison Officer to keep other agencies updated and the Public Information Officer to be used in press releases (see Appendix Ie, example press release).

The Wildlife Branch Director can quickly relay wildlife statistics by using the Wildlife Care and Processing Daily Report form (Appendix IVf) to summarize the numbers of wildlife care and processing personnel on scene, numbers of live and dead animals (e.g. numbers of animals washed, unwashed, oiled, unoiled, euthanized, and released) at the facility, and listed species information. In addition, the Wildlife Recovery and Transportation Daily Report form (Appendix IVd) summarizes daily numbers of animals collected, live and dead, from the different beaches and divisions, and includes numbers of personnel and equipment being used for recovery. If species-specific information is needed, e.g. numbers of common murres affected, it can be obtained from the Processing Unit Leader, who keeps the Live and Dead Bird and Mammal Data Logs, which can be sorted by species.

The Wildlife Branch Director must develop communication protocols to ensure information gets exchanged between the Wildlife Branch Director and Group Supervisors prior to each daily planning meeting.

3600.6.1.4 Coordination within ICS

The Wildlife Branch Director may need to attend tactics meetings, planning meetings, and Unified Command briefings. The Wildlife Branch Director may also need to report on special activities, events, requests and occurrences to Operations Section Chief and the Situation Unit in the Planning Section. The Wildlife Branch Director must coordinate with the Air Operations Branch Director regarding any wildlife overflights. The Wildlife Branch Director must also coordinate with Logistics Branch for any materials needed.

The Wildlife Branch Director must coordinate with the Resources at Risk Specialist in the Planning Section's Environmental Unit to provide the Specialist with information the Planning Section can use to help make decisions about response strategies. The Wildlife Branch Director can provide the Planning Section staff with any known wildlife concerns and with wildlife reconnaissance data. Information received from aerial, boat or shoreline survey teams can be provided to a GIS specialist (usually in the Planning Section) who can create maps depicting resources at risk on open water and on shorelines. This information should be used by the Planning Section for strategic assessment and for planning response strategies. The Planning Section should also use this information to evaluate potential effects of different response countermeasures and response strategies, including -- "no action" -- to cause the fewest adverse effects to wildlife and wildlife habitat from response actions. Likewise, the Resources at Risk Specialist can provide the Wildlife Branch with information about sensitive species and habitat locations, along with maps of sensitive areas, and of sensitive cultural-resource locations. This information can then be taken into account when planning surveys or other Wildlife Branch Operations.

The Wildlife Branch Director must also coordinate with local land managers and trustees regarding beach access, wildlife recovery efforts, response actions, and any non-spill databases

they may have (refer to ACP Planning Section, Environmental Sensitivity Indices, Site Summary Sheets for land manager/trustee contact information). Ideally, land managers and trustees should be integrated with wildlife recovery, reconnaissance, and with identifying resources at risk, because they are most familiar with their beaches. If marine mammals are a concern, then NMFS, a trustee agency, must be consulted. Refer to Appendix Vb, the Memorandum of Agreement, for specific instructions for coordinating with NMFS about dead and live mammal collection or capture, mammal rescue attempts, transportation, rehabilitation, and the Marine Mammal and Turtle Stranding Report. In addition, land managers and trustees may have concerns about exotic species that will need to be addressed during a response (for example, they may suggest washing equipment [boots or tires] before accessing other sites to reduce dispersal of non-native plants or invertebrates).

Land managers and trustees (e.g. National Marine Sanctuaries) are very familiar with dead and live wildlife on their beaches and often maintain databases that contain information from regular beach surveys, which are not spill–related. For example, Monterey Bay National Marine Sanctuary BeachCombers look for and mark (toe clip) beached birds to monitor causes of mortality, where carcasses wash ashore, what feeds on them and how long they remain. Spill data from bird and mammal recovery and intake should be shared with the trustees, ideally on a daily basis. For example they may be given data from the Wildlife Recovery and Transportation Daily Report form (Appendix IVd), so they can evaluate those data in comparison to their baseline data (e.g. natural mortality trends), and via the Wildlife Branch Director, provide input into response decisions made by the Planning and Operations Sections.

As soon as practical at the conclusion of the spill (ideally within 30 days), or monthly in the case of a protracted event, the Wildlife Branch Director should provide the local land managers and trustees with copies of the Live and Dead Bird and Mammal Data Logs from the Processing Unit for their non-spill databases. These logs note among other items species, date and time animal was collected, collection location, if toe-clipped animals were picked up, and number of toes clipped.

3600.6.1.5 Developing Incident Action Plan

The Wildlife Branch, supervised by the Wildlife Branch Director, develops the draft Wildlife Operations portion of the Incident Action Plan (IAP) for a response, usually on a daily basis; ICS 204 and 215 forms (Appendix IVb) are usually required for this purpose. Upon spill notification, the Wildlife Branch Director must evaluate a rapidly-changing situation and develop an initial action plan, often literally while on the way to the spill site. Often, the only source of information is the responsible party's initial report of what was spilled, amount, and location, or observations by land managers of oiled wildlife strandings on beaches. It is rare when all variables (e.g., oil type and volume, location, geographic range of spill, and wildlife at risk) are known prior to on-site reconnaissance. This section describes some of the information and variables that the Wildlife Branch Director must consider for establishing the Wildlife Branch and for preparing IAP's.

The Wildlife Branch Director must evaluate the situation in light of available personnel, equipment and deployment options within the context of the applicable ACP. Many factors will influence the response, and must be considered in order to determine which resources to mobilize. Some of these factors include:

- Type of oil (including persistence and emulsification properties);
- Quantity of oil;
- Frequency of oil deposition and oiled wildlife strandings;
- Concentrations of wildlife in the spill area;
- Presence of threatened or endangered species and/or critical habitat;
- Potentially affected habitats/ESI Rankings;
- Geographic range of reported spill;
- Wildlife resources at risk;
- Human health hazards (Site Characterization);
- Time of Year/Season (i.e., presence of migratory or breeding birds and mammals;
- Land management status (e.g., State Park, Sanctuary, Wilderness Area, Ecological Reserve, etc); and
- Weather and oceanographic conditions.

The Wildlife Branch should review the relevant factors listed below with Wildlife Branch and Planning Section personnel:

- Resources at risk;
- Wildlife Branch resource needs;
- Available wildlife personnel and equipment resources;
- Initial wildlife protection response objectives such as identifying areas with abundant wildlife that must be protected first and the tactics that should be implemented to maximize protection;
- Likely wildlife stranding locations for recovery teams.

When the review is completed the Wildlife Branch Director can formulate the initial Wildlife Operations portion of the Incident Action Plan.

After the initial ICS 204 forms for each Wildlife Operations Group are prepared, the Operational Planning Worksheet (ICS 215 form) is prepared to identify resources required, acquired and still needed. The ICS 215 form is presented at the Tactics meeting and when finalized, is provided to the Logistics Section. Resources to be provided by DFG, other trustee agencies, and OWCN must be clearly articulated on the 204's and 215 forms and provided to the Logistics Section for tracking purposes so that Logistics understands they're already on order or in service, and does not procure these resources again See Appendix IVb for example of completed ICS 204 and 215 forms. The Wildlife Operations portion of the Incident Action Plan should include, in priority order, response objectives, equipment, Group and Unit designations, and task assignments.

In addition to the ICS 204 form, an expanded Wildlife Operations Plan can be prepared to provide more details regarding objectives, responsibilities, assignments, and more specifics for each Group. More details can be provided on work locations for teams, survey protocols, equipment needed, safety issues, sensitive species information, communication protocols, beach access directions, division maps, forms, etc. See Appendix IIIa for example spill specific Wildlife Operations Plan.

3600.6.1.6 Wildlife Branch Demobilization

A Demobilization Plan must be developed and implemented. The Wildlife Branch will produce a list of resources to be released and coordinate recommendation for release of resource with the Resources Unit Leader in Planning Section.

3600.6.2 Wildlife Reconnaissance Group

While baseline data, as discussed in Section 3600.3.9 are essential, variations from baseline conditions, due to daily and seasonal movements of birds and mammals, necessitate rapid, real-time characterization or reconnaissance of wildlife concentrations in the spill area. Depending upon the size and type of the spill and the habitats involved, real-time data will be collected using aircraft, boat and ground surveys. Survey types are summarized below. Specific standardized, repeatable methods have been developed for each type (ECI, 1992).

Given the types of surveys, it follows that the Wildlife Reconnaissance Group consists of the Aerial, Boat, and Shoreline Survey Units. The main objective of reconnaissance surveys is to evaluate the numbers, species, and locations of animals that could be impacted by the spill. The Wildlife Reconnaissance Group identifies wildlife resources at risk by collecting real-time information about wildlife species, abundance and location. The Wildlife Branch will use those data to assist the Planning Section (Resources at Risk Specialist in the Environmental Unit) to develop response strategies that minimize adverse effects on wildlife, and that take into account wildlife issues (e.g. presence of listed species). Survey results and location and numbers of animals should be plotted on maps.

For sea otters, to supplement aerial and boat surveys, consider obtaining the more accurate sea otter rangewide density-count data which are available by sub-areas throughout the range. These census data are updated every six months and can be obtained by contacting the U.S. Geological Survey at (805) 927-3898 or the DFG Santa Cruz Sea Otter Facility at (831) 469-1719.

For other marine mammals and sea turtles refer to Appendix Vb, a Memorandum of Agreement with NMFS which includes, as an attachment, the contingency plan for response to pinnipeds, cetaceans, and sea turtles. It also contains specific instructions for coordination with NMFS regarding dead and live mammal sightings (free swimming, beached, or both). A Marine Mammal and Turtle Stranding Report must be submitted for dead marine mammal and turtle sightings and, for live animals, upon capture but prior to transport.

For reconnaissance surveys that must be done in habitat for threatened or endangered species in a National Marine Sanctuary, Congressionally Designated Wilderness Area, or California State Park or Beach, it is necessary to contact and coordinate with the appropriate trustee agency (refer to ACP Planning Section, Environmental Sensitivity Indices, Site Summary Sheets for land manager/trustee contact information). Refer to Appendix IIIh, Example Protocol for Search and Collection in Listed Species Habitat (Snowy Plover Example) and Appendix IIIi, Example Protocol for Monitoring, Reporting, and Collecting in a National Marine Sanctuary (Farallon Island Sanctuary Example).

Depending on the spill size, Wildlife Reconnaissance Group teams may be integrated with Wildlife Recovery and Transportation teams or Shoreline Cleanup Assessment Teams, although is usually not desirable, because it may over-task the teams. If Reconnaissance Teams recover live animals during their surveys, transfer arrangements must be made promptly, so Transfer Teams can take live birds and mammals to an OWCN rehabilitation facility.

Experienced personnel are essential for effective wildlife surveillance. Observers should be able to identify species, behavioral characteristics, and be knowledgeable about local ecological factors.

3600.6.2.1 The Wildlife Reconnaissance Group Supervisor Duties

In addition to the general duties listed in Section 3600.6 page 23, the Wildlife Reconnaissance Group Supervisor is responsible for establishing and supervising the Aerial, Boat and Shoreline Reconnaissance Units (see below for duties of each Unit Leader). These Units identify wildlife resources at risk by collecting real-time information about wildlife species, abundance and location. Duties include coordinating with other trustee agencies and land managers as necessary (refer to ACP Planning Section, Environmental Sensitivity Indices, Site Summary Sheets for land manager/trustee contact information). The Group Supervisor will establish and supervise as many units as necessary to survey the spill area from the air, boat, and shoreline. If surveys need to be done in habitats for threatened or endangered species or in a National Marine Sanctuary refer to Appendix IIIh, Example Protocol for Search and Collection in Listed Species Habitat (Snowy Plover Example) and Appendix IIIi, Example Protocol for Monitoring, Reporting, and Collecting in a National Marine Sanctuary (Farallon Island Sanctuary Example).

Because all Wildlife Reconnaissance Units operate in the field, collecting real-time information, it is critical for each to Unit maintain communications with the Command Post. The Group Supervisor is responsible for creating and disseminating protocols for timely information gathering and reporting by Unit leaders. Each Team should receive survey and reporting instructions so that the data can be provided to the Wildlife Branch Director, as required. Reporting instructions should include the phone number and name of the person to whom findings are to be reported, and specific items which need to be reported, (e.g., live vs. dead species, numbers and species of oiled and unoiled resources at risk, endangered and threatened species). Each Team should also receive instructions on the disposition of samples or animals collected, survey forms, and the locations of intake stations. Communications must be open throughout the day to provide new direction to Teams or for them to report observations to the Wildlife Branch Director.

The Group Supervisor will report the Wildlife Reconnaissance Group Units' operational activities and results to the Wildlife Branch Director. To assist in the development of response strategies, the Branch Director is responsible to report the Units' observations to the Resources at Risk Specialist in the Planning Section's Environmental Unit. The Group Supervisor should discuss results with Recovery and Transportation Group Supervisor and other trustee agencies (e.g., USFWS), as needed, to determine if threatened, endangered, or other vulnerable species should be preemptively captured to remove them from imminent danger.

Reconnaissance Group personnel may include professional wildlife biologists, trustee agency representatives, OWCN personnel, contractors (e.g. the OSPR Aerial Wildlife Response Team), and other trained people. If specialized surveys for threatened and endangered species are needed, additional wildlife specialists may be called in by the Reconnaissance Group Supervisor or Wildlife Branch Director. These specialists will advise the Branch Director and the Unified Command about threats to listed species, the locations and numbers of oiled animals, and the need for capture, hazing or other protection strategies. These experts will typically use species-specific observation protocols. In 1997 and 1998, for example, such specialists conducted useful surveys of California brown pelicans, western snowy plovers and marbled murrelets during oil spills. A list of experts and contractors is maintained in a separate document by OSPR titled "List of Experts and Contractors for Wildlife Operations".

3600.6.2.2 Aerial Survey Unit & Unit Leader Duties

In addition to general duties listed in Section 3600.6 page 23, the Aerial Survey Unit Leader, who reports to Wildlife Reconnaissance Group Supervisor, is responsible for coordinating, conducting, and supervising aerial reconnaissance surveys of wildlife at the spill site and in areas at risk from the spill. This includes reporting observations to the Wildlife Branch Director through the Wildlife Reconnaissance Group Supervisor.

Using a standardized protocol (Appendix IIIe, Aerial Survey Methodology for Wildlife Reconnaissance), the Aerial Survey Team will characterize the abundance, distribution, and species identities of on-water marine birds, and mammals, in or near the spill area (ECI, 1992). These surveys are conducted by experienced contractors, using a twin-engine high wing aircraft, typically a Partenavia. Surveys are flown at an altitude of 200ft. (~60m) and a speed of approximately 90 knots (167 km/hr), although in bays and estuaries the aircraft may need to increase its altitude. The survey route and transect design is established just prior to the flight to accommodate the specific areas, issues, and species of concern for a particular spill. Surveys may include near shore, offshore, and bay or estuarine components. While in the air or immediately after landing, summaries of bird and mammal observations are reported to the Command Post to the Group Supervisor who relays the information to the Wildlife Branch.

At present, (2005), OSPR has a contract with experts at the University of California, Santa Cruz to perform aerial surveys for wildlife reconnaissance. A Department of Fish and Game plane is usually used for these flights. These flights complement, but do not replace, operational overflights for mapping oil.

3600.6.2.3 Boat Survey Unit & Unit Leader Duties

In addition to general duties listed in Section 3600.6 page 23, the Boat Survey Unit Leader, who reports to Wildlife Reconnaissance Group Supervisor, is responsible for coordinating, conducting, and supervising boat reconnaissance surveys of wildlife at the spill site and in areas at risk from the spill. The Unit Leader reports observations to the Group Supervisor who relays the information to the Wildlife Branch Director.

Surveys for birds and marine mammals present during an oil spill can provide estimates of the potential effects of a spill upon individuals or populations in the area. Standardized protocols and skilled observers provide invaluable information for immediate evaluation and response, and for long-term planning or mitigation for adversely affected species. Surveys should be started as soon as possible after a spill occurs and continue as long as needed to monitor effects on the surveyed populations. Timely, regularly scheduled reports of observations are essential to keep the Unified Command informed and provide the best possible response. Refer to Appendix IIId, Boat Wildlife Survey Methodology for Oil Spill Response, for details.

Boat Survey Unit teams may be dispatched to assess oiled and at-risk wildlife in offshore or nearshore coastal waters, bays or sloughs, and they are also frequently used to search shorelines inaccessible by land. Teams will characterize species abundance and distribution of wildlife within the spill area. In most cases, personnel will be observing seabirds and marine mammals. Observations of other natural resources, such as schooling fish, sea turtles, and plankton blooms, are also useful. If the situation is changing rapidly, this information is commonly known as "ephemeral" or, more correctly, "time-critical."

Observers will collect information on species present and their condition (live, dead, oiled, and unoiled); basic weather and sea conditions; and any other notable occurrence which may be useful to response efforts. Upon survey completion, survey results should be transmitted to the Wildlife Reconnaissance Group Supervisor as soon as possible. Information can be recorded on the Wildlife Reconnaissance Survey Form (Attachment IVe).

In some cases, boat reconnaissance survey teams may also be responsible for collecting dead wildlife and catchable live oiled animals (usually, and preferably, this is a Wildlife Recovery and Transportation Group duty). If this is a designated team assignment, personnel on board must have the necessary minimum qualifications, along with specialized training and equipment needed to capture animals expected to be found. Otherwise, sightings of recoverable wildlife must be relayed to the Wildlife Reconnaissance Group Supervisor for immediate follow-up and coordination with the Wildlife Recovery and Transportation Group.

Boat reconnaissance surveys would most likely be done by contracted experts, and are conducted along transects using the Distance Sampling Techniques (Buckland et al. 1993). The survey route and transect design are established just prior to the survey to accommodate the specific areas, issues, and species of concern for a particular spill. Surveys should be adapted to the coastline or bathymetric configuration of the area being monitored, in order to measure population or density of the various seabird and marine mammal species within the area. In determining transect design, the goal is to efficiently and effectively sample areas in and around

the spill site which represent areas of potential impact and which might contain birds at risk of oiling. Data collection and survey methods generally follow those of Ralph et al. (1995) where one or two observers stand near the bow of the boat and scan a 180 degree arc. This Distance Sampling Technique is used primarily to survey for marbled murrelets. Strip transect survey methodologies could also be appropriate depending upon the species at risk. In all cases, at least one member of the team must be qualified to operate the boat, given the habitat, weather, and sea conditions that exist during the survey. Other personnel must be qualified to observe wildlife at sea and on-water. Depending on the boat and search area, two persons are a minimum crew. However, an optimal and preferable boat crew has three people for safety and search efficiency.

Boat Reconnaissance survey teams may operate from a variety of craft depending on the habitat and conditions. Any coastal surveys will be conducted from a boat certified for ocean use and suitable for expected weather and sea conditions. This may include 20 to 30ft. work boats, such as Boston Whalers™, or inflatable boats. In small bays or sloughs shallow-draft boats are preferred. These may include skiffs, inflatables, airboats, hovercraft, canoes, and kayaks.

Boat Reconnaissance Survey teams should be provided with data on resources at risk, including environmentally sensitive site and response strategy information. Some suggested survey equipment includes:

- Proper and necessary personnel protective equipment (PPE);
- Nautical charts and/or topographic maps;
- Waterproof notebooks and applicable survey forms;
- Binoculars;
- Cellular phones or VHF radios; and
- GPS receiver units.

3600.6.2.4 Shoreline Survey Unit & Unit Leader Duties

In addition to the general duties listed in Section 3600.6 page 23, the Shoreline Survey Unit Leader, who reports to Wildlife Reconnaissance Group Supervisor, is responsible for coordinating, conducting, and supervising shoreline wildlife reconnaissance operations, which includes reporting observations to the Wildlife Branch Director through the Group Supervisor to aid in response strategy development. Duties also include coordinating with the other trustee agencies and land managers.

The Reconnaissance Group Supervisor or Shoreline Survey Unit Leader will assign tasks and sections of the coast to survey to each Team (Carter and Page, 1989). Each Team should receive survey and reporting instructions and instructions on the disposition of samples or animals, if collected.

Shoreline Survey Team(s) will be dispatched to gather time-critical or “ephemeral” information via surveys in shoreline areas that are oiled or that are expected to be oiled. These reconnaissance surveys will provide information regarding:

- Biological resources (live and dead; oiled and non-oiled);
- Shoreline habitats;
- Seasonal features such as bird and pinniped rookeries;
- Marine mammal haul-out areas;
- Estuarine mudflats and marshes;
- Streams blocked by natural seasonal berms, and
- Rivers flowing to the ocean.

This information is passed on to the Planning Section through the Group Leader and Wildlife Branch Director to aid in response strategy development. The Unit Leader should discuss results with Group Supervisor to determine if threatened, endangered, or other vulnerable species should be preemptively captured to remove them from imminent danger.

While it is not the primary function of the Shoreline Survey Unit to collect wildlife, Reconnaissance Group teams may at times be asked to help with search and collection (which is normally, and preferably, conducted by the Recovery and Transportation Group). In other instances, attempts have been made to join Wildlife Reconnaissance Teams with Shoreline Cleanup Assessment Teams. In any case, uncaptured, oiled wildlife sightings should be reported to the Recovery and Transportation Group leader.

During the initial stages of a spill, shoreline survey teams will be assembled by the Wildlife Branch Director. One person on each team will be designated as the team leader. This person will be responsible for decisions relating to human safety and data integrity, for reporting reconnaissance information back to the Unit Leader, Group Supervisor or Wildlife Branch Director prior to each daily pre-planning meeting, and for disseminating the following day's assignment to team members.

Survey teams should be provided with data on resources at risk, including information about environmentally-sensitive sites and response strategies so that proper precautions can be taken to minimize adverse effects upon wildlife and the habitat and to minimize conflicts with response actions during surveys. The teams should be briefed on how to avoid collateral injuries to the habitat when surveying by foot in wetlands.

Survey teams should be provided with the Beach Search Effort Log (Appendix IVc) and Wildlife Reconnaissance Survey Form (Appendix IVe). The same version of each form should be used by all shoreline survey teams. GPS receivers should be used, if at all possible, to mark locations of survey beginning and end points, where animals or samples are collected, survey transects lines and pathways, and to augment photo documentation. Other suggested survey equipment includes:

- Proper personnel protective equipment (PPE);
- Regional maps that include consistent beach names, numbers, and access routes;
- Waterproof notebooks and applicable survey forms;
- Binoculars;

- Hand talleys (e.g., "Clicker counters)";
- Cellular phones or VHF radios; and

During moderate-sized spills, survey teams should consist of a minimum of two people for safety and to expedite the surveys, although studies (Roletto et al., 1998) have shown that on long, broad sandy beaches a survey team of three people is optimal for efficiency. Team tasks can be divided among team personnel in any number of ways (e.g., by shore zone, by function, or by expertise). For example, on a two-person team, one member can conduct wildlife observations, recording numbers and species of live birds and mammals, both oiled and unoiled, and assessing the potential for capture of oiled wildlife. The second member can note weather and shoreline type, and investigate the wrack line and shore for evidence of oiling and identification of any dead oiled wildlife, including listed species.

Walking beaches on foot is the most common and most effective method for locating wildlife with little disturbance. A number of survey teams may be needed to expedite data collection and reporting. However, depending on the terrain and the size of the area to be covered, four-wheel drive vehicles or ATVs can also be used effectively to reduce survey or search time.

Situations in which vehicles might cause collateral injuries to wildlife, or in which they might cause damage to rare plants and cultural resources, must be considered and addressed before reconnaissance surveys via ATVs, or other vehicle type, are authorized by the Wildlife Branch Director. However, prior to authorizing any activities using vehicles for surveys or collections, the Branch Director must also obtain authorization from appropriate trustee agencies, such as, National Parks, Congressionally Designated Wilderness Areas, or California State Parks and Beaches.

Because motorized vehicles may haze animals back into the water, caution and planning must be exercised. There should be close coordination with the Recovery Group to avoid unintentional hazing of injured wildlife. If ATVs are used, riders must have specific ATV safety training. Refer to Appendix IIIc for ATV Protocol.

It is always wise to coordinate with local law enforcement agencies and provide them with courtesy notifications about shoreline activities. This will prepare them for any complaints from concerned citizens. To minimize complaints to these agencies, uniforms or other identifying devices and logos should be worn or displayed so the public can understand why ATVs or four-wheel-drive trucks are in an otherwise restricted area.

Shoreline survey teams generally are staffed by professional wildlife biologists, who most likely will have previous experience with oil spills and specific coastal field-observations. At the discretion of the Reconnaissance Group Supervisor, survey teams also may include qualified OWCN staff, personnel from other trustee agencies and land managers, or other trained observers with knowledge of, and experience with oiled wildlife identification and handling. OSPR maintains a list of experts in a separate document titled "List of Experts and Contractors for Wildlife Operations". At a minimum, personnel conducting wildlife reconnaissance should be experienced at identifying species of pinnipeds and California coastal birds, including gulls,

alcids, shorebirds and diving birds, should be able to identify both breeding and alternate plumage and be able to determine at a distance whether a live bird is oiled.

3600.6.3 Wildlife Hazing Group and Hazing Group Supervisor Duties

In addition to the general duties listed in Section 3600.6 page 23, under the direction of the Wildlife Branch Director, the Wildlife Hazing Group Supervisor is responsible for implementing and supervising wild life hazing operations which, when implemented, are intended to minimize injuries to wildlife by attempting to keep animals away from the oil and cleanup operations. Duties also include coordinating with other trustee agencies (e.g., NMFS and USFWS). Refer to ACP Planning Section, Environmental Sensitivity Indices, Site Summary Sheets for land manager/trustee contact information.

Hazing activities must take place only under the authority and oversight of trustee agencies, in coordination with the Unified Command. The Wildlife Branch Director or Hazing Group Supervisor will make the recommendation to haze to the Unified Command. The recommendation will be guided by site-specific and species-specific factors present at the time of the spill, and availability of proven hazing techniques.

Personnel in the Hazing Group may include personnel, with appropriate training, from state or federal trustee agencies, University of California, or OWCN.

Hazing activities, observations, and results are to be reported to the Wildlife Branch Director and the Planning Section's Environmental Unit Leader.

Hazing usually includes deployment of acoustic or visual hazing devices. For details regarding hazing, refer Section 3600.5.3 and to Appendix IIIf, the General Wildlife Hazing Plan for Oil Spills in California.

3600.6.4 Wildlife Recovery and Transportation Group

Wildlife Recovery and Transportation of oiled wildlife involves collecting dead or capturing live animals and transporting them to processing centers. These activities are performed by the Wildlife Recovery and Transportation Group, in close coordination with the Unified Command along with state and federal trustee agencies. Wildlife collection by any agency or organization must be done under the direction of the Unified Command. Their activities must comply with agreements and permits from the appropriate management agencies (i.e. DFG, NOAA-NMFS, and USFWS) (see 14 CCR 679(d)).

Recovery and Transportation personnel are drawn from OSPR, OWCN, other state and federal trustee agencies, and approved contractors. As with other Wildlife Operations activities, Recovery and Transportation personnel will include a high proportion of professional wildlife biologists under certain circumstances. Trained, qualified volunteers obtained through OWCN or OSPR Volunteer Coordinators, or both can be used as long as training requirements are met and OSHA standards are adhered to. If marine mammals are involved in a spill, NMFS or OWCN can provide assistance with mammal capture (Geraci and Lounsbury, 1993).

Refer to Section 3600.4.4 for criteria to activate and deactivate Recovery and Transportation teams. These criteria are guidelines and were developed from past incidents.

Although not preferable, depending on the spill size, Wildlife Recovery and Transportation teams may be integrated with Wildlife Reconnaissance Group teams or Shoreline Cleanup Assessment Teams.

3600.6.4.1 Survey and Recovery Procedures

Once animals have become oiled, habitat-specific and species-specific strategies to recover and remove disabled and dead wildlife are required. Systematic surveys for collecting affected wildlife should be carried out several times per day. Preferred search times are at dawn, at dusk, and mid-day. Successful captures not only depend on the condition of the animal, but also on the training and experience of the handler, along with techniques and equipment used. For detailed and specific information on wildlife capture training, techniques and tools, see OWCN 1998a and 1998b.

Surveys are often conducted on foot or by boat, however, the use of ATVs and four-wheel-drive trucks can expedite searches (refer to Appendix IIIc, All Terrain Vehicle Protocol for details on ATV safety). Caution should be exercised when using vehicles because they may scare wildlife back into the water or cause the animal(s) to flee the site. Special considerations pertaining to collateral injuries to the habitat must also be taken into account when surveying in wetlands on foot.

Refer to Appendix IIIg, San Mateo Mystery Spill Oiled Bird Recovery and Transportation Group Protocols for example protocols for field team assignments for Recovery and Transportation Group.

Each team should consist of at least two people, and should be outfitted with the resources and equipment necessary to complete its assignment. At a minimum, the team should use a Beach Search Effort Log (Appendix IVc) to document areas searched, method of search, wildlife collected, field band or tag number for collected animals, etc. GPS receivers should be used to mark locations of each survey's beginning and end points, locations where animals are collected or captured, survey transects lines and pathways, and to locate where photos were taken. This GPS information can be downloaded to a GIS workstation by a specialist who can graphically depict wildlife recovery sites and stranding locations.

In the future, barcodes on labels or other methods of identification for live and dead animal bags may be used, which will allow the Group Supervisor and Wildlife Branch Director to track the individual animals through capture or collection, processing, and for live animals, the rehabilitation and release process. For tracking and chain of custody purposes, all live and dead animals recovered should be banded or tagged (for birds and mammals, respectively). This should happen in the field upon collection. The band or tag number must be noted on the Beach

Search Effort Log Form (Appendix IVc). Permanent bands or tags will be applied and logged at the processing facility. If bands/tags/labels are not available, a unique identifying number (e.g., first and last initial of collector plus a unique number) must be noted on the animal (or transport container) and on the Beach Search Effort Form and/or any field notes.

Recovery and Transportation Group personnel should provide on each animal transport container the following information:

- Collector's name (and phone number if not part of the Recovery & Transportation Group effort);
- Collection location: general name and GPS coordinates;
- Beach search number (as determined by the Beach Search Effort Log);
- The date the bird was *recovered* from the beach;
- The time the bird was *recovered* from the beach; and
- Preprinted label number or band/tag number or Field ID number (e.g., collector's initials plus unique ID number) if labels/bands/tags are not available.

Specialized equipment is identified in OWCN 1998a, 1998b. Refer to Appendix Ic, "List of Equipment to Bring in Field for Search and Collection" for details. Basic equipment should include:

- Proper PPE;
- Dead bird body bags (collection containers);
- Bird bands and mammal tags, various sizes;
- Field search forms;
- Pillow cases and pet carriers;
- Field tags and "Sharpie" pens to label and record collection information and Chain of Custody;
- Regional and Segment maps;
- Cellular phones or VHF radios;
- GPS receivers; and
- Basic capture equipment (e.g., nets).

3600.6.4.2 Beached Carcass Removal

Appropriate measures must be undertaken by the RP and the Unified Command to insure that dead animals are collected appropriately, identified, documented held until disposal is approved by the trustees. Oiled wildlife collection, treatment and rehabilitation are legislatively mandated and are important for humane care, spill documentation, and public relations reasons (Jessup and Mazet, 1999). In addition, the prompt removal of disabled and dead oiled animals from the environment can be critical to minimize the effects of secondary oiling such as poisoning of predators and scavengers.

While conducting beach surveys during the response, it is not always feasible, reliable, or practical to attempt to discriminate between spill-related and non-spill-related casualties. For example, scavenged carcasses, birds with dark plumage, wet carcasses, or carcasses with oil sheen or small amounts of oil that may be spill related are not always identifiable in the field as such. In addition, seabirds are known to succumb to the effects of oil ingested during feeding or preening, even when no oil is apparent on their plumage. Also, during a spill response, the public often complains about carcasses on the beach. Finally, because all carcasses found within a spill area are potential evidence, the evidence must be handled according to established protocols. For these reasons, when Recovery and Transportation teams are activated, all live, disabled, and freshly-dead animals, oiled and unoiled, should be collected and processed for triage and rehabilitation or for processing and storage, as appropriate. Processing of carcasses includes analyzing them at a facility using uniform scientific protocols to document whether they suffered any spill-related effects.

3600.6.4.3 Bird Recovery and Transport

Handling captured birds poses risks to both handler and birds. The potential for birds to inflict injury on the handler means proper PPE is essential. Eye protection should always be worn. Use of appropriate gloves and outer clothing to prevent oiling of the handler are also important. An effective capture occurs swiftly, with minimal pursuit and noise, and uses correct techniques based on conditions and species being pursued. To prevent further injury to wildlife, the use of proper handling techniques by trained personnel is essential. All animal handling should be done in a manner that minimizes stress to the animal. For details on proper handling techniques, see OWCN 1998a and “Wildlife Handling” in Appendix III-l.

Success at recovering wildlife (especially mobile individuals) depends on proper technique and timing. Teamwork is essential to minimize stress in oiled birds (OWCN 1998a). Methods used for search and collection will depend upon spill location and modes of transportation made available through the Unified Command. Bird retrieval techniques are most effective if begun shortly before dawn. As they lose their waterproofing, many species of birds move to shore, first preening on open beaches and river banks, and then later hiding under cover.

Birds should be retrieved by qualified teams on foot with handheld nets. Small projectile nets, linear sections of net placed on the ground, and baited walk-in or swim-in traps may also be used. For more information on capture equipment and techniques, see OWCN 1998a.

After capture, birds should be immediately placed in pillowcases, then transferred to ventilated, solid-sided pet carriers, cardboard boxes, or plastic airline kennels for transport. Attempts should be made to transfer all birds from pillowcases to boxes ASAP to reduce hypothermia, and only one bird should be placed in each box to reduce aggression and potential cross-contamination of feathers. If space or materials are limited, social, nonaggressive birds (such as common murres) can be placed with one or two conspecifics that have been captured at the same location and which have a similar degree of oil exposure. Aggressive species, such as loons and cormorants, should always be individually housed.

Once captured, oiled live birds should be transported to the designated OWCN facility as soon as possible. If marine bird species must be transported for long distances or remain in pet carriers for longer than three hours, net-bottomed floors should be used, and if possible, the animals should receive basic field stabilization (i.e. wiping oil from mouth and nares and feeding of warmed Pedialyte® with a stomach tube). Because hypothermia is a serious biomedical problem which affects oiled wildlife, it is advisable to bring oiled birds into a warm indoor environment as soon as possible, and to transport them in warm, ventilated vehicles. The use of chemical handwarmers have been used in the past to provide warmth to affected wildlife in cardboard pet carriers as long as the warmer is wrapped in a towel to prevent direct contact with the animal. See Appendix IIIj for Bird Transport Protocols which includes specific information for transporting Brown Pelicans..

3600.6.4.4 Marine Mammals Recovery and Transport

The Wildlife Branch Director should evaluate need for marine mammal capture, on a case-by-case basis, in consultation with those trustee agencies that have specific regulatory authority: USFWS, NMFS, and DFG. Protocols that guide decisions to capture and transport marine mammals are described in OWCN 1998b. In addition, for specific instructions for coordinating with NMFS regarding dead animal recovery and live mammal capture, refer to Appendix Vb, an MOA with NMFS which includes, as an attachment, the contingency plan for response to pinnipeds, cetaceans, and sea turtles. A Marine Mammal and Turtle Stranding Report must be submitted for dead marine mammal sightings and upon capture and prior to transport of live mammals.

If oiled pinnipeds, sea otters, or cetaceans are determined to be ill and to require retrieval, capture will be instituted by the Wildlife Branch Director in conjunction with DFG, NMFS (for pinnipeds), USFWS (for sea otters), and the OWCN. All members of the California Marine Mammal Stranding Network (MMSN) who work with live marine mammals are members of the OWCN. Therefore, use of the expertise from these organizations is ensured.

Capture and transportation of oiled mammals should be performed only by qualified personnel who have received the appropriate training for safety, marine mammal handling and animal restraint. For more information regarding actual techniques for search and collection of marine mammals, see OWCN 1998b.

In general, potential benefits of capture must outweigh potential negative consequences. A decision to capture should consider size of individual animals and their location with respect to other marine mammals. The method of capture may vary accordingly. While sea otters and fur seals can be immediately and acutely affected by oil, other pinnipeds may be able to withstand some short-term external exposure to oil. Captures will generally be considered for isolated individuals on beaches, spits, tide flats or other relatively flat surfaces, using herding boards and nets (brail, breakaway, or steel-frame pole). Less often, captures may be attempted from rock jetties, piers, docks, or even in the water, for severely debilitated animals. Long-handled dip nets, floating bag nets and net guns have all been used with some success. Depending on the

species involved, aquatic captures may use tangle nets, float nets or Wilson traps. Animals will be placed into kennel carriers or similar cages of an appropriate size and with care to not cause hypo or hyperthermia, immediately transported to designated marine mammal care facilities (see Table 1 and Figure 3).

3600.6.4.5 Sea Otter Recovery and Transport

Southern sea otters are a special case because they are extremely susceptible to oil and they are a federally-listed species. Capture and treatment of sea otters is addressed separately in the Sea Otter Oil Spill Contingency Plan, (Appendix IIIk). In short, in California, sea otters will generally be captured by crews led by federal or state trustee agency personnel. Sea otters that are not visibly oiled, are not acting ill or abnormally, or are not likely to become oiled will not be intentionally captured. If the capture crew has questions or doubts, individual animals may be captured for further evaluation or inspection. Every effort will be made to have petroleum-detection kits capable of rapid oil detection available to assist with the evaluation. When a captured animal does not have obvious evidence of oil, is not debilitated by oil, and is not at risk, the crew will tag it, take a blood sample, and release it immediately. Under dire circumstances, preemptive captures may be considered, if the Unified Command authorizes them, and adequate facilities for transport and holding are available.

3600.6.4.6 Recovery and Transportation Group Supervisor Duties

The Recovery and Transportation Group is directed by the Recovery and Transportation Group Supervisor, who reports to the Wildlife Branch Director. In addition to the general duties listed in Section 3600.6 page 23, the Group Supervisor is responsible for 1) the recovery of dead and live wildlife that have been identified by the Wildlife Reconnaissance Group or other individuals (Refer to Survey and Recovery Procedures section above for details), and 2) for the transportation of affected wildlife from field-recovery personnel and stabilization facilities to primary care facilities for processing and rehabilitation. Through the Wildlife Branch Director, the Group Supervisor should frequently update and coordinate with the Environmental Unit in the Planning Section about conducting surveys in the spill area. The Group Supervisor should maintain the Wildlife Recovery & Transportation Daily Report form (Appendix IVd) and distribute it to the Wildlife Branch Director and the Planning Section. This form tallies numbers of live and dead animals collected from each beach or division, along with numbers of personnel and equipment in use.

Land managers and trustees (e.g. National Marine Sanctuaries) are very familiar with dead and live wildlife on their beaches and often maintain databases that contain information from regular beach surveys, which are not spill–related (refer to ACP Planning Section, Environmental Sensitivity Indices, Site Summary Sheets for land manager/trustee contact information). For example, Monterey Bay National Marine Sanctuary BeachCombers look for and mark (toe clip) beached birds to monitor causes of mortality, where carcasses wash ashore, what feeds on them and how long they remain. During most spill responses some level of natural background mortality can be expected to contribute to the number of beachcast birds. Local land managers and trustees, in coordination with the Recovery and Transportation Group Supervisor, can evaluate recovery data and make recommendations to the Wildlife Branch Director on future

wildlife response actions.

The Group Supervisor, in consultation with the Wildlife Branch Director, will decide if night Recovery and Transportation operations are needed. Night operations will only be considered if they can be done safely and are approved by the Unified Command.

Because these units all operate in the field, it is critical for each Unit to maintain a means of communication to the command post. The Group Supervisor is responsible for creating and disseminating protocols for timely information gathering and reporting by Unit leaders. Each team should receive survey and reporting instructions. Reporting instructions should include the phone number and name of the person to whom findings are to be reported, and specific items which need to be reported, (e.g., live vs. dead species, numbers and species of oiled and unoiled animals, resources at risk, endangered and threatened species). Each team should also receive instructions on survey forms, the disposition of animals collected, and the locations of intake stations. Members of the survey teams should receive a daily phone list, including a number at the Incident Command Post for the Wildlife Branch Director and his or her alternate, the Group Supervisor, and contacts to gain access to special or secure areas. Communications must be maintained throughout the day to provide new direction to field crews or to report observations to the Command Post.

It may be necessary to establish several Strike Teams or Task Forces to survey the entire spill area. Separate dead and live animal teams may be needed. Under certain circumstances (such as smaller spills), the Wildlife Branch Director may designate the Wildlife Care and Processing Group Supervisor to fill the role of the Wildlife Recovery and Transportation Group Supervisor.

3600.6.4.7 Bird Recovery and Transportation Unit Leader Duties

In addition to the general duties listed in Section 3600.6 page 23, the Bird Recovery and Transportation Unit Leader, who reports to the Wildlife Recovery and Transportation Group Supervisor, is responsible for staffing the unit for search and recovery of oiled birds, dead and alive (and in some circumstances, unoiled dead birds) and for their transport to processing or rehabilitation centers. This includes collecting and disseminating field data (search effort, animal information, and sample acquisition) to the Group Supervisor, and ensuring the appropriate field stabilization and treatment protocols for oiled birds are followed. The Unit Leader must work cooperatively with other field teams (e.g. resources at risk, shoreline cleanup assessment) for timely dissemination of field data. The Group Supervisor must be briefed daily on activities.

3600.6.4.8 Marine Mammal Recovery and Transportation Unit Leader Duties

In addition to the general duties listed in Section 3600.6 page 23, the Marine Mammal Recovery and Transportation Unit Leader, who reports to the Wildlife Recovery and Transportation Group Supervisor is responsible for search and recovery of dead and live oiled pinnipeds, small cetaceans, and sea otters, and for their transport to processing or rehabilitation centers. For specific instructions for coordinating with NMFS about dead and live mammal recovery and capture, refer to IIIk, the Sea Otter Oil Spill Contingency Plan and Appendix Vb, an MOA with NMFS which includes, as an attachment, the contingency plan for pinnipeds, cetaceans, and sea

turtles.

The Unit Leader is responsible for staffing the Unit sufficiently for a collecting and disseminating field data (search effort, animal information, and sample acquisition) to the Group Supervisor, and for ensuring the appropriate field stabilization and treatment protocols for oiled mammals are followed. This will require working cooperatively with other field teams (e.g. Resources at Risk and Shoreline Cleanup Assessment Teams) for timely dissemination of field data. The Group Supervisor must be briefed on daily activities.

3600.6.5 Wildlife Care and Processing Group & Group Supervisor Duties

The Wildlife Care & Processing Group within Wildlife Operations has two Units. The Wildlife Care Unit ensures that wildlife exposed to petroleum products receive the best achievable care by providing access to veterinary services and to rehabilitation centers. The Wildlife Processing Unit ensures oiled animals are tracked, so the Unified Command can obtain oiled wildlife statistics which will be used for a variety of purposes, such as response strategy development, media updates, and rehabilitation cost information. Wildlife care includes triage, stabilization, treatment, rehabilitation and release. Wildlife processing includes documenting and recording essential information on live and dead wildlife. The Volunteer Coordinator and Facility Coordinator also work under this Group. This Group is directed by the Wildlife Care & Processing Group Supervisor who reports to the Wildlife Branch Director.

In the majority of past spill responses in California, the Wildlife Care and Processing Group Supervisor position has been filled by the OWCN Director or Response Veterinarian. Although not preferable, the Wildlife Care and Processing Group Supervisor may be the same as the Wildlife Recovery and Transportation Group Supervisor during small spills.

Depending on the size of the spill, Live Animal and Dead Animal Strike Teams can be formed to improve triage and stabilization capabilities for the live animals.

If marine mammals are involved in a spill, NMFS or OWCN can provide assistance with treatment (Geraci and Lounsbury, 1993).

If necessary, OSPR or OWCN mobile veterinary laboratories and animal care trailers can be dispatched to the field so veterinarians and staff can perform preliminary examinations and stabilize wildlife prior to their transport to the rehabilitation facility.

In addition to the general duties listed in Section 3600.6 page 23, the Wildlife Care and Processing Group Supervisor is responsible for:

- Activating and maintaining wildlife rehabilitation and processing centers during a response (there are permanent wildlife rehabilitation facilities located throughout the state see Figure 2 and Table 1)
- Coordinating combined resources and capabilities of OWCN and any other private

wildlife care organization to provide optimum treatment and rehabilitation services

- Working with the Wildlife Recovery and Transportation Group Supervisor to coordinate activities and ensure transportation to established treatment centers for oiled animals that need extended care and treatment
- Receiving and processing dead and live wildlife, which includes collecting necessary evidentiary (feather and tissue) samples from all animals, following the detailed procedures outlined in Appendix III-l,
- Arranging for appropriate locked and cataloged storage for dead animals
- Maintaining status (number, type, species, locations, and disposition of oiled wildlife), using the Wildlife Care and Processing Daily Report Form (Appendix IVf)
- Provide local land managers and trustees with copies of the Live and Dead Bird and Mammal Data Logs from the Processing Unit as soon as possible at the conclusion of the spill so these data can be incorporated into their databases.
- Coordinating release of rehabilitated wildlife
- Updating Wildlife Branch Director on activities at least daily

3600.6.5.1 Volunteer Coordinator Duties

Under the direction of the Wildlife Care and Processing Group Supervisor, the Volunteer Coordinator will manage the influx of pre-trained and convergent volunteers. The Volunteer Coordinator organizes and schedules volunteers, schedules training sessions as needed, and handles logistical needs for volunteers. Most volunteers are provided by and coordinated through OWCN by the OWCN and OSPR Volunteer Coordinators.

When the Volunteer Operations Center is operated at an OWCN affiliate organization's facility, the State Volunteer Coordinator and OWCN's Volunteer Coordinator will work directly with the affiliate's Volunteer Coordinator. If the participating organization does not have a designated Volunteer Coordinator then the Wildlife Rehabilitation Staff will take on these responsibilities.

3600.6.5.2 Facility Coordinator Duties

Under the direction of the Wildlife Care & Processing Group Supervisor, the Facility Coordinator will:

- Manage the wildlife facility,
- Act as the point of contact with the Group Supervisor and Wildlife Branch Director,
- Ensure complete and accurate chain of custody for samples,
- Direct activities of station personnel,
- Procure equipment and assures functionality of equipment, and
- Keep the facility running smoothly.

Depending on the size of the spill, there may be more than one facility, and each facility can include a Receiving Center and a Processing Center. The Receiving Center is where animals are received from Recovery and Transportation Group. The Processing Center is where data is recorded on the logs before live animals transfer to veterinary services or before dead animals are transferred to storage.

3600.6.5.3 Wildlife Care Unit and Unit Leader Duties

In addition to the general duties listed in Section 3600.6 page 23, the Wildlife Care Unit Leader, who reports to the Wildlife Care and Processing Group Supervisor, is responsible for receiving, processing, stabilizing, treating, and rehabilitating oiled live wildlife. Duties also include coordinating the release of rehabilitated wildlife. To provide optimum treatment and rehabilitation services, the Unit also coordinates the combined resources and capabilities of OWCN and any other private wildlife care organizations.

Depending on the extent of the spill effects, the Unit can include two task forces to handle specialized wildlife rehabilitation issues: the Oiled Bird and the Oiled Marine Mammal Task Forces.

In most circumstances, the Wildlife Care Unit processes live animals by following the same procedures used by the Wildlife Processing Unit (see Appendix III-l). However, under certain instances (e.g. large scale spills), live animal processing may be accomplished through the Wildlife Processing Unit with the establishment of Live and Dead Animal Processing Strike Teams. Check the OWCN website at www.owcn.org for periodic updates to the processing protocols.

Oiled Wildlife Task Forces (Oiled Bird and Oiled Marine Mammal Task Forces) may be assembled and disassembled as necessary, based on classes of animals either affected or predicted to be affected. Each Task Force Leader is responsible for receiving live oiled birds, pinnipeds, or sea otters requiring extended care and treatment at established treatment centers, recording essential medical information, conducting triage, stabilization, treatment and rehabilitation. Depending on the size of the spill, Strike Teams may be assembled and disassembled as necessary, for medical intake (initial assessment and exam), washing and rehabilitation (care of unwashed and washed animals including, if necessary, multiple stations for oiled animal care, post-wash care, pre-release care, food preparation).

Animals may be received either directly from the Wildlife Recovery and Transportation Group personnel at the facility, or from the Live Animal Strike Team, a component of the Wildlife Processing Unit (see below). If animals arrive directly from the field without being processed by the Wildlife Processing Unit, all evidentiary and log information must be captured by the Strike Team upon intake evaluation.

Specific protocols for care of these animals will not be addressed here because they are highly specialized, requiring special permits, expertise and veterinary attention. Details can be found in

one or more of the following references: Appendices IIIm and IIIn for OWCN Protocols for the Care of Oil-Affected Birds and Marine Mammals, respectively, and Appendix IIIk, the Sea Otter Oil Spill Contingency Plan. The most current information on rehabilitation protocols can be found on the OWCN website at www.owcn.org. Refer to Appendix IVi and j for the OWCN Oiled Bird Daily Progress Form, and OWCN Oiled Mammal Daily Progress Form for treatment and progress notes.

Birds are the most abundant wildlife taken in at processing and care centers. They are often treated and released within three weeks of capture, once they meet pre-established physiological and behavioral milestones specified by the detailed protocols. However, time in care depends on spill location, type of oil involved, how oil affects species, pre-existing injuries, seasonal conditions, and other logistical concerns.

When rehabilitated animals are ready for release, clean, non-oiled release sites should be chosen after consulting the appropriate trustee agency or agencies. While exceptions can be made during spill emergencies, some agencies have specific requirements or policies regarding releasing animals on their properties. For example, trustee agencies, such as California State Parks or National Marine Sanctuaries, may only allow the release of an animal on their property if that animal was captured from the subject area or if there has been a determination that the release will not be detrimental to the ecosystem. As a part of spill response actions, birds and mammals are banded or tagged and, in some cases, fitted with telemetry equipment for post-release monitoring.

To guide the Wildlife Care Unit in the treatment of remaining animals, necropsies on selected animals may be conducted by wildlife pathologists during a spill response. However, the Wildlife Branch Director or his designee must obtain pre-approval from the Unified Command for such examinations. There are several reasons for necropsies during a spill response. For example, necropsies may be performed during response activities to determine whether death resulted from natural causes or a pollution event. Another reason is captivity-related diseases may necessitate necropsies to identify pathogens so that corrective medical actions can be taken (Jessup and Leighton, 1996). Fatalities among apparently unoiled wildlife may necessitate necropsies to determine whether animals ingested petroleum.

Veterinary facilities designed for oil spill response must meet minimum space requirements and incorporate all required aspects of wildlife treatment and rehabilitation. An ideal facility should include:

- Areas for intake, physical exam, and evidence processing;
- A veterinary hospital with isolation capabilities,
- Indoor wildlife housing and caging,
- Food storage and preparation facilities,
- Animals washing and rinsing areas,
- Indoor drying pens,
- Outdoor pool and pen areas,

- Pathology facilities,
- An area with restrooms eating and volunteer training,
- Administrative offices with multiple phone and fax lines and conference space,
- Storage,
- Access to a large parking area, and
- Adequate ventilation, hot and cold water, and climate control.

3600.6.5.4 Wildlife Processing Unit and Unit Leader Duties

In addition to the general duties listed in Section 3600.6 page 23, the Wildlife Processing Unit Leader, who reports to the Wildlife Care and Processing Group Supervisor is responsible for receiving, documenting, and storing all dead (and sometimes live) animals (birds, pinnipeds and sea otters) that have been collected following detailed procedures outlined in Appendix III-l, which includes collecting necessary evidence samples (feathers and tissue) from all animals. Wildlife Processing information is necessary to track costs, in order to provide sufficient information to enable the Unified Command to make timely and accurate statements concerning effects on wildlife, to help determine whether or not the animals collected are spill-related, and for injury determination. This systematic documentation will help provide an understanding of the consequences of an oil spill to wildlife populations in and around affected areas and assist in the guidance of oil spill response actions.

The Unit Leader is also responsible for maintaining and reporting information on wildlife collected including number, type, species, locations, and disposition of oiled wildlife, using the Wildlife Care and Processing Daily Report Form (Appendix IVf). The Group Supervisor and Wildlife Branch Director need to be briefed at least daily.

The Wildlife Processing Unit Supervisor may be the same as the Wildlife Care Unit Supervisor during small spills, i.e. those in which only a few dozen birds are affected.

In most circumstances, only dead animals will be processed by the Wildlife Processing Unit. However, during large-scale incidents, a Live Animal Strike Team and a Dead Animal Strike Team may be mobilized to effectively and efficiently process large numbers of animals. During spills where only the Dead Animal Strike Team is operating under the Processing Unit, all the responsibilities normally taken on by the Live Animal Strike Team will be absorbed by the Wildlife Care Unit and will follow the Live Animal protocols. For large spills, multiple stations for processing may be needed and positions within each station include a manager, receiver, data collector, data recorder, photographer, and animal handler. In such instances a single person may fill several positions simultaneously.

All dead and live wildlife encountered in the spill response area should be retrieved by the Wildlife Recovery and Transportation Group and transported to the wildlife processing and care centers, regardless of the carcass or live animal's condition (degree of decomposition, degree of oiling, etc.) In addition, all capture-related information (e.g. location, name, unique identifying number or band/tag number, GPS coordinates, date, and time) must accompany the animal or

carcass to the facility. The presence of such documentation will be verified when workers at processing or care centers receive wildlife from the Wildlife Recovery and Transportation Group. Photographs should be taken and feather samples should be collected and preserved for future use if chemical fingerprinting of the oil becomes necessary. Species identification will be determined and oil information documented. All information necessary to complete either the live or dead bird and mammal log is collected before animals enter the rehabilitation process or dead animals are taken to storage. Refer to Appendix IVg and IVh for the OWCN Oiled Animal Data Log – Dead Animals, and the OWCN Oiled Animal Data Log – Live Animal.

In the future, barcodes or other devices will be used on field tag labels which can be scanned so a unique identity can be given immediately to that individual, which it will retain while it remains in the system.

Following intake and documentation, all dead animals and appropriate evidence (photos, feather samples and fur swabs) should be systematically packaged and transported to a secure freezer for storage, such as the ones at the Marine Wildlife Veterinary Care and Research Center at Santa Cruz, San Francisco Bay Oiled Wildlife Care & Education Center in Fairfield, or the Los Angeles Oiled Bird Care & Education Center in San Pedro. This will protect the interests of trustees, RPs, and USCG. If necessary, the carcasses can be re-examined to resolve problems with body counts and species identification, or to secure additional samples for investigations. When federal and state trustee agencies give the authorization, carcasses will be disposed of in accordance with federal and state laws.

3600.7 DEMOBILIZATION OF WILDLIFE OPERATIONS

Upon conclusion of Wildlife Operations, its activities are demobilized, following standard checkout procedures identified through the ICS and coordinated with the Unified Command. (Note: demobilization of other non-wildlife response activities is addressed in the Area Contingency Plan). Wildlife Operations demobilization occurs only after a conclusive determination by the Wildlife Branch Director, in consultation with the Wildlife Care & Processing Group Supervisor, other Wildlife Operations Group Supervisors, and other trustee agencies and land managers, that all wildlife affected by the spill has been accounted for. Demobilization of Wildlife Operations groups and units will generally lag behind that of response equipment and personnel, for several reasons, such as animals remaining in rehabilitative care, the presence of residual oil, and the presence of visibly oiled pinnipeds and free-flying birds. This lag time may last several weeks.

The last resource of the Unified Command to be demobilized will likely be OWCN personnel, equipment and facilities used during the spill. Because cleaning, treatment and rehabilitation of oiled wildlife may last several weeks, animals brought the rehabilitation center late in the response may require care after other response resources have demobilized. In general, the rehabilitation center will continue to operate for three weeks following admission of the last animal into rehabilitation. During that time, as more animals are released and fewer animals remain in care, personnel and equipment resources will be gradually demobilized. Before closing, after the last animal leaves care, the center will be sanitized, decontaminated, restocked

and prepared for the next response.

Depending on the trustee or land manager, local shoreline survey programs, such as those for the Farallon Islands, Point Reyes National Seashore, Gulf of the Farallones and Monterey Bay Sanctuaries may continue to monitor the occurrence and deposition of oiled wildlife, and to report to the Unified Command any anomalies or low, chronic presence of tar balls and oiled wildlife.